The Mining Journal

RAILWAY AND COMMERCIAL GAZETTE.

FORMING A COMPLETE RECORD OF THE PROCEEDINGS OF ALL PUBLIC COMPANIES.

No. 632.—Vol. XVII. LONDON, SATURDAY, OCTOBER 2, 1847. [Price 6d.

VALUABLE MINE MATERIALS FOR SALE, BY AUCTION.

MR. WILLIAM RICHARDS, Auctioneer, will submit FOR SALE, BY PUBLIC AUCTION, on Wednesday, the 6th day of October next, at Eleven o'clock in the forenoon, at the NORTH UNITED MINES, in the parish of ZENNOR, in the county of CORNWALL, the following superior

MINING MATERIALS,

THE WHOLE OF WHICH ARE NEARLY NEW—VIZ.:

A first-rate PUMPING-ENGINE (from the manufactory of Messrs. Harvey and Co., at Hayle Foundry, in 1843), 30-inch 9-feet stroke cylinder—7 feet in the shaft—with a boiler, 8½ tons.
PUMPS—60 fathoms 6-inch, 20 fathoms 5-inch, 90 fathoms 5 inch, 18 fms. 4½-inch.
2 6-inch poles and bottoms; 2 5-inch ditto; 1 4 inch ditto.
2 5-inch working barrels; 2 4½-inch ditto.—Several windbores.
60 fathoms iron rods, at surface.
30 fathoms 7-inch wood rods; 90 fathoms 5-inch ditto; 90 fathoms 5½ and 6-inch ditto.
3 balance-bobs; capstan shears.
120 fathoms new 9-inch capstan-rope; 36-inch bellows.
Anvil and smiths' tools, horse-whim, &c., cage-whim and horse-whim, small capstan.
180 fathoms 7-16th whim-chain, 80 fathoms 9-16th ditto, horse-whim kibbles, &c.
Sundry lots of timber, new and old.—ACCOUNT-HOUSE FURNITURE, &c.

The attention of mine agents and adventurers in mines is particularly invited—the whole of the materials, having been carefully selected, are well adapted for general mining purposes, and the engine will be found to be one of the best in the county of Cornwall.

For viewing the above, application should be made to the agents, on the mines; or to Mr. Samuel Higgs, Green Market, Penzance, the purser; and for further particulars, to Mr. William Richards, auctioneer, 17, Regent-terrace, Penzance.
Dated Sept. 22, 1847.

VALUABLE MINING MATERIALS FOR SALE.

MR. F. A. DAVIS will SELL, BY AUCTION, on Thursday, the 7th of October, 1847, at Eleven o'clock in the forenoon, at HAWKMOOR MINE, in the parish of CALSTOCK, near Tavistock, the undermentioned MATERIALS of the said mine, comprising—

19 9-feet 9-inch pumps
1 6-feet 8-inch matching-piece
1 3-feet 8-inch ditto
1 4½-feet 8-inch ditto
2 4½-feet 7-inch ditto
3 6-feet 8-inch doorpieces and windbores
1 9-feet 8½-inch working barrel
2 9-feet 8-inch ditto
1 9-feet 6-inch ditto, with pump-work, complete
A balance-bob
About 70 fathoms of 2, 1½, and 1¼-inch round iron-rods
5 Fathoms 6-inch square wood ditto
2 4-feet whim pulleys, with saddles and brasses
A quantity of pulleys and stands
A new air-machine, with horizontal valves and pulley stands, screw and stock, with plates and taps, from 1¼-inch to ¼-inch
1 38-inch smith's bellows, in good condition
1 Smith's crane
Ditto anvil and vice
A very good smith's horse
5 Whim kibbles
1 Machine ditto

About 60 fathoms 6-inch whim-rope (nearly new), 40 fathoms 4½-inch blocks-rope, smiths' and miners' tools, in great variety, a quantity of flanch, bolts, and burs, pump rings, spanners, &c., for 9 and 7-inch pumps, yokes and glands, 3 poppet-heads, 3 teaklea, with layers, stands, &c., a quantity of ¾-inch chain, 2 pairs shear plates, beam, scales, and weights, grindstone, 5 miner's chests, carpenter's bench, with sundry tools, 8 feet 3½-inch square hammered iron, a lot of useful iron, of various sizes, old wrought and cast-iron, new and old brasses, about 50 fathoms of good ladders, 10 fathoms 3-feet wood launders, some excellent oak, Dram balk plank, and other useful timber, wheel and handbarrows, solves, roofing, windows, doors, and a great variety of other articles.

The auctioneer respectfully begs to call the attention of mine agents and others to the above materials—the principal part of which are nearly new, and of the best description.

The whole may be viewed on application to Capt. Philip Richards, on the mine; and any further particulars obtained of him, or at the office of the auctioneer, in Tavistock.
Dated West-street, Tavistock, Sept. 27, 1847.

TO BE PEREMPTORILY SOLD, BY AUCTION.

MR. EDISBURY will SELL, BY AUCTION, in One Lot, pursuant to a decree of the High Court of Chancery, made in a cause of "Birch *against* Price," with the approbation of Sir William Horne, one of the Masters of the said Court, at the Lion Inn, Wrexham, in the county of Denbigh, on Tuesday, the 12th day of October, 1847, at Three o'clock in the afternoon, the FREEHOLD ESTATE, consisting of

PLAS-MOSTYN FARM, COLLIERIES, AND MINERALS OF COAL AND IRONSTONE,

SITUATE IN THE SAID PARISH OF WREXHAM.

Particulars may be had gratis: in London, at the said Master's chambers, Southampton-buildings, Chancery-lane; Messrs. Milne, Parry, Milne, and Morris, solicitors, Harcourt-buildings, Temple; of Messrs. Hughes, Fairfoot, and Webb, solicitors, Clement's Inn; and in the country, of Mr. Exuperius Pickering, mine agent and valuer, Ruabon; Mr. Jones, solicitor, Brynhyfryd, Ruthin; and Mr. Humphreys Jones, solicitor, Wrexham; at the place of sale; and at the principal inns, in Ruabon, Liverpool, Manchester, Chester, Shrewsbury, Wolverhampton, and Birmingham.

MINING MATERIALS FOR SALE.—A 48-inch cylinder PUMPING-ENGINE, plain and strong—working an 8-feet stroke, with two cylindrical boilers, and all their appendages.
A 36-inch cylinder PUMPING-ENGINE, plain and strong, with a parallel motion at each end of the beam—working a 7-feet stroke, including one cylindrical boiler, and its appendages.
A portable condensing STEAM-ENGINE, with cylinder, 10 inches diameter, in a cast-metal framing, including one waggon, boiler, and its appendages.
WINDING GEAR, consisting of a pair of spur-wheels, shaft, and pedestals, and wheels for flat-ropes.
A CRUSHING-MILL, for lead ore, consisting of a pair of 30-inch rollers, wrought-iron shafts, wrought-iron balance levers, cast-metal framing, brass steps, and driving gear attached, including wood sills and framing.
A strong and powerful WINDMILL, with five sails, 63 feet diameter—supported upon a strong cast-metal column, with all the necessary driving shafts, wheels, &c., complete, and in excellent working order.
A large lead ore CRUSHING-MILL, attached to the windmill, consisting of one pair of 25-inch rolls, and two pairs of 16-inch rolls, with wrought iron shafting, brass steps, &c., fixed in a strong massive cast-metal framing, and in excellent working order.
Application to be made to Mr. Joseph Howell, engineer, Hawarden, Flintshire.

FOR SALE, at TRETOIL MINE, LANIVET, BODMIN,
ONE STEAM PUMPING-ENGINE, 66-inch, with boilers, about 20 tons.
ONE ditto ditto 20-inch.
One old boiler; 2 plunger-poles, 17-inch; 1 ditto, 13-inch; 1 ditto, 8-inch; 1 ditto, 6-inch; 3 whim-ropes, 1 horse cage whim.
1 capstan oak axle, 1 shears, about 45-feet.
24 17½-inch pumps, 1 H-piece tap-door, stuffing-box and glands,
120 fathoms good shaft ladders.

Application to be made to Mr. Henry Thomas, 8, George-yard, Lombard-street, London; to Mr. George Geach, Bodmin; or to Capt. Henry Williams, on the mine.
September 30, 1847.

DESIRABLE SLATE QUARRIES AND CLIFFS TO LET, situate in the parish of TREVALGA, CORNWALL.—TO BE LET, BY TENDER, for a term of 21 years, from Lady-day next, all those excellent and productive SLATE STONE QUARRIES, called the GROWA QUARRIES, together with a RIGHT to SEARCH and QUARRY for SLATE in the RUN OF CLIFFS, extending from the said quarries westward to a place called Tramble Hay, all situate in the said parish of Trevalga.

The Growa Quarries have been long and justly celebrated for the superior quality of their slate, and are capable of being worked to an almost unlimited extent. They shut on the sea, and the produce can be shipped on the spot, or at the port of Boscastle, about a mile distant. The adjoining run of cliffs, named above, are supposed to contain abundance of SLATE ROCK; and, as the extent to be granted is upwards of a mile, it affords ample space, and a good opportunity for the employment of capital.

For particulars and conditions of letting, apply to Mr. W. F. Pearce, solicitor, Camelford, Cornwall—to whom tenders, in writing, are requested to be sent on or before the 7th day of October next.—Dated Sept. 14, 1847.

WALL'S END COLLIERY.—TO BE LET, and entered upon on or after the 20th November next, for such a term of years as may be agreed upon, all that current-going COLLIERY, well known by the name of WALL'S END COLLIERY, at present held by William Russell, Esq., under lease from the Dean and Chapter of Durham—comprising the COAL MINES under the whole of the lands in the township of WALL'S END, in the county of Northumberland.

The Low Main and the Beaumont Seams, which have been bored to, remain throughout untouched; and the Beesham Seam supplies the vend of the existing colliery.

The colliery is contiguous to, and has shipping berths in, the River Tyne.

Plans of the workings of the colliery, and further particulars, may be known on application to Mr. E. F. Boyd, Urpeth Colliery, Chester-le-street; or at the office of the Registrar of the Dean and Chapter of Durham, Durham.
Durham, Sept. 11, 1847.

TO LET, the MINERALS in the LANDS of AULDHOUSE, parish of LESMAHAGOW, and county of LANARK, consisting of BLACK-BAND and CLAY-BAND IRONSTONES, COAL, and OTHER MINERALS. These minerals to the extent of about 550 acres, are situated into the most valuable portion of the Douglas and Lesmahagow Mineral Basin, and will be completely opened up by the railways already authorised, and in course of construction. The minerals in a portion of the lands immediately adjoining are already let, opened up, and in active operation—thereby proving their value; whilst the large fields in the neighbourhood, still unoccupied, makes the above well worth the attention of ironmasters and capitalists.

Apply to John Smith, Esq., writer, Lanark, the proprietor; or James Ferguson, mining engineer, Auchinlieath, Lesmahagow, respecting the terms of lease, and other particulars.
Auchinlieath, Sept. 10, 1847.

PONTYPOOL, MONMOUTHSHIRE.—TO BE LET, for a long term, the important and valuable property known as the PONTYPOOL IRON AND TIN-PLATE WORKS, and comprising a most extensive and productive TRACT of MINERALS, of which about 1700 acres are still unexhausted, together with the BLAST-FURNACES, FORGES, and TIN MILLS, connected therewith. Four blast-furnaces have been erected on the property, and the average weekly make of each is not less than 100 tons of iron, of the best quality. There are also three forges in operation, which possess ample steam and water-power for the production, weekly, of 120 tons of hammered charcoal bars, 60 tons of coke bars, and 200 tons of merchant bars.

The TIN MILLS, which have been erected at a very considerable expense, are replete with every requisite and convenience; and, in connection with the forges, make, at present, 1200 boxes of tin-plates per week.

The whole of the machinery is of the best construction, and in excellent working order. There are seven steam-engines and ten water-wheels employed at the works and mines; and the property is intersected in every part by convenient and well-constructed tramroads.

The FARM LANDS, consisting of about 400 acres, of well cultivated and productive land, will be included in the lease, together with about 250 agents' and workmen's houses, sale yard for coal, coal-tar works, gas works, brick works, limestone quarries and kilns, stone quarries, and every other necessary appendages to an extensive work.

The property contains numerous SEAMS of COAL and IRON ORE, of superior quality; one coal vein alone, which is peculiarly adapted for smelting, being considered capable of supplying no less than 13 blast-furnaces with fuel for fully 50 years.

An extensive colliery might also be established, with considerable advantage, in connection with the works, as the coals are highly approved of for steam, coking, and domestic purposes. The whole of the minerals may be "won" at comparatively moderate depths, and can be worked very cheaply.

The mines already opened are sufficiently extensive to furnish the existing works with materials for a considerable period. The property is situated within 10 miles of the port of Newport. The Monmouthshire Canal passes close to the works; and, with the Newport and Pontypool Railway, now in process of construction, will afford a cheap and convenient mode of communication with the shipping port. The Newport, Abergavenny, and Hereford Railway, with the extension line to Taff Vale, will likewise be carried through the property, and thus establish a direct connection with Liverpool, and the midland and northern districts of England.

Applications, for terms and particulars, to be made to Messrs. Llewellin and Nephew, mining engineers, Pontypool; or to Messrs. Prothero, Towgood, and Fox, solicitors, Newport, Monmouthshire.

MINERALS TO BE LET, ON LEASE, for such a number of years as may be agreed on, consisting of IRONSTONE, FIRE-CLAY, FREESTONE, LIMESTONE, and COAL, in the lands of Mansfield, situated in the parish of New Cumnock, Ayrshire. The lands extend to about 2430 imperial acres.

The Glasgow, Dumfries, and Carlisle Railway passes through the estate, and will afford an easy transport of all its minerals to market.

Offers for a lease to be addressed to Messrs. Dundas and Wilson, C.S., 16, St. Andrew-square, Edinburgh, who will show a plan of the estate and sections of the borings.

Mr. Robert Ker, at Mansfield Colliery, will show the lands.
Mansfield House, August, 1847.

TO BE LET, the PARK-HILL MINES, DEAN FOREST, GLOUCESTERSHIRE—containing ONE MILLION TONS OF COAL, and ONE MILLION TONS of rich IRON ORE, which, being calcareous, smelts well with argillaceous ironstone, and may be delivered in large quantities to the Staffordshire, Shropshire, and Welsh iron-works, at a price far below the cost of local ironstones. The mines are drainable by level, and can be opened at a trifling expense; and, were blast-furnaces erected, their produce might be smelted on the spot into excellent iron.—Apply (post paid) to Henry H. Fryer, Esq., solicitor, Coleford, Gloucestershire.

IMPORTANT TO THE PROPRIETORS OF COAL AND OTHER MINES.—FOURDRINIER'S PATENT for "Improvements in Apparatus to be used in Raising or Lowering Weights in Mines or other places," and for the Protection of Life when the Rope, or Chain, Breaks. By the use of this apparatus, which does not alter the present mode of working, the miner may look forward to his daily safe return to his home and family; and the numerous *lamentable deaths* caused by the breaking of the rope, or chain, will, for the future, be prevented.

Further information may be obtained by addressing either the patentee, Mr. Edward N. Fourdrinier, paper manufacturer, Cheddleton Mill, near Leek, Staffordshire; or Mr. Joseph Fourdrinier, 68, Arlington-street, Camden Town, London.

METAL CASTINGS.—ROGERSTONE HAMLET FOUNDRY, NEWPORT, MONMOUTHSHIRE.

CARR & WILTHEW beg to announce, that they have COMMENCED the FOUNDRY BUSINESS, in the LOOM and SAND DEPARTMENTS; and trust, by strict attention and superior workmanship, to merit a share of public patronage.

T. CARR having had, for many years, the superintendence of the most extensive foundries in the north (Newcastle-on-Tyne), where his practical experience in CASTINGS, of all sizes and kinds, for LOCOMOTIVE ENGINE WORK, &c., was most extensive and successful, they flatter themselves in being able to give every satisfaction to parties favouring them with orders.—Sept. 22, 1847.

LLYNVI IRON COMPANY.—Notice is hereby given, that an EXTRAORDINARY GENERAL MEETING of the proprietors, or partners, of the LLYNVI IRON COMPANY will be HOLDEN at the offices of the company, 21, Moorgate-street, London, on Wednesday, the 6th day of October, 1847, at One o'clock in the afternoon precisely, to take into consideration a resolution which will be then proposed, authorising the directors, at their discretion, from time to time to borrow and take up at interest, for the use and benefit of the copartnership, any sum or sums of money, or to obtain any advance or advances, at interest, from the bankers of the copartnership, from time to time, for the use of the copartnership, by the modes respectively specified in the company's Deed of Settlement; such loans and advances not to exceed, in the whole, the sum of £30,000, in addition to the aggregate amounts mentioned in the 93d clause of the said Deed of Settlement. By order of the board,
London, Sept. 22, 1847. F. W. GIBBON, Secretary.

ASSAYING AND ANALYSIS.—Mr. MITCHELL begs to inform the MANAGERS, &c., of MINES, SMELTING-WORKS, and MANUFACTORIES, that he still continues to CONDUCT ASSAYS and ANALYSES of all PRODUCTS, metallurgical and manufacturing, at his LABORATORY,
22, *HAWLEY-ROAD, KENTISH TOWN, LONDON,*
to which address communications are to be forwarded.—Instruction in all branches of assaying and analysis as usual.

ADCOCK'S PATENT SPRAY PUMP.—This important INVENTION having been PERFECTED, and brought into SUCCESSFUL PRACTICAL OPERATION at LLANHIDDEL, at pits belonging to R. J. Blewitt, Esq., M.P., Llantarnam Abbey, near Newport, Monmouthshire, the PATENTEE is ready to RECEIVE, and to execute, ORDERS.—Apply to Henry Adcock, C.E., at his offices, 137, Strand, London, where pamphlets, descriptive of the invention, may be had; at the office of the *Mining Journal*, 26, Fleet-street; and through any respectable bookseller—price 6d.

PATENT GALVANISED IRON AND WIRE ROPE WORKS, *MILLWALL, POPLAR.*

ANDREW SMITH begs to inform the Mining, Railway, and Shipping interests, that he has obtained a PATENT for an IMPROVED METHOD of GALVANISING IRON, producing a much superior article at a considerable saving in cost—the improved process for galvanising wire rope, adding only £10 per ton instead of £20, under the ordinary processes. The rope is extensively used in damp situations, for mining and railway purposes, and for ships' standing rigging.

CUNNINGHAM & CARTER'S PNEUMATIC RAILWAY SYSTEM.—The attention of the scientific public is requested to this SYSTEM, which unites great simplicity with economy, and is entirely free from those dangers and consequences which are the inseperable attendants on the use of the locomotive engine.

The MODEL may BE VIEWED, and every information given, on application to Mr. Cunningham, Auction Mart Coffee-house; or Mr. Carter, engineer, Peak-hill, Sydenham.

COMMERCIAL TELEGRAPH.—That the public may judge of the VALUE of Messrs. BRETT & LITTLE'S TELEGRAPH, in comparison with the DOUBLE NEEDLE TELEGRAPH, a DESCRIPTIVE PAMPHLET of the INVENTION, with a Comparative Analysis of their Merits, and the Opinions of the Public Press, is published by W. J. Adams, 59, Fleet-street, price 1s., and may be had of all respectable booksellers, and at the railway stations.

Tickets to view the instruments can only be obtained of
BRETT & LITTLE, Furnival's Inn, London.

THAMES ECONOMICAL STEAM-BOAT COMPANY. (REGISTERED PURSUANT TO ACT OF PARLIAMENT.)

ESTABLISHED ON THE PRINCIPLE OF CHEAP AND EQUALISED FARES.

Capital £40,000; in 8000 shares, of £5 each,
On which £2 per share will only be called until after a meeting of the shareholders, approving of a further call to extend the operations of the company.

No call to exceed 10s. per share.
The shares may be paid by small instalments.—*vide* Prospectus.
Each shareholder to receive a bonus of free passage.
Tickets to the full amount of paid subscription.

The object in promoting this company is to provide for the public a safe and economical steam communication from London-bridge to Chelsea, Battersea, &c., and from London-bridge to Greenwich, assisted by all the advantages which improved science can suggest.

The company will run express boats morning and evening.

A considerable portion of the shares having been subscribed for, application for the remainder may be made at the offices of the company, 134, Upper Thames-street; or to the solicitor, 47, Bedford-row, where prospectuses and plans may be obtained, and every information furnished. By order of the board, J. BECKET.

TO BE SOLD.—FOR SALE, BY PRIVATE CONTRACT, from ONE to SIX SHARES in the ROSE-IN-VALE CONSOLS MINE, in the parish of PERRANZABULOE, CORNWALL.—Apply to Mr. Wm. White, Woodbine Villa, North-road, Exeter.

FOR SALE—THE WHOLE, OR ONE-HALF, INTEREST in a COPPER and SILVER-LEAD MINE, in MERIONETHSHIRE, NORTH WALES.—For particulars, and cards to view the same, apply to Captain John Jenkin, Aberdovey, Merionethshire.

WHEAL CURTIS COPPER MINING COMPANY.—TO BE SOLD, TEN SHARES in the above undertaking—price, 18s. per share.—Apply by letter (pre-paid), to "W. B.," care of Mr. Beckett, No. 117, Bishopsgate-street-within.

WANTED—A STEAM STAMPING-ENGINE, of 30-inch cylinder.—Applications, stating all particulars, to be made to Mr. John Pett, Callington.

FOR SALE, a 70-inch cylinder ENGINE, without boilers.—For price, and further particulars, please apply to Samuel Grose, Esq., engineer, Wall, Gwinear, Camborne.

STEAM-ENGINES.—From 8 to 20-horse power ENGINES ALWAYS IN STOCK.
Apply to Mr. CAPPER, Engine-Maker and Founder, BIRMINGHAM.
Price—£12 to £16; with boiler, £22 per horse.

TO IRONMASTERS.—WANTED, ONE THOUSAND TONS of 56 lbs. RAILS, by the end of March next—delivered on board at Cardiff or Newport.—Apply to Mr. C. H. Capper, engineer, Birmingham.

PIG-IRON.—JAMES BANKS AND CO. have always FOR SALE SCOTCH PIG-IRON, deliverable, free on board, at the Broomielaw, Port-Dundas, Ardrossan, and in the Frith of Forth, at Charleston.
Glasgow, 21, Renfield-street.

MINING OFFICES—Established Thirteen Years.—WILLIAM TRENERY begs to inform his friends and the public, that he has REMOVED from No. 50, Threadneedle-street, to
No. 9, ST. MICHAEL'S-ALLEY, CORNHILL, LONDON.

MR. R. TREDINNICK, MINING AGENT AND DEALER IN EVERY DESCRIPTION OF SHARES.
THREE KING'S COURT, LOMBARD-STREET, LONDON.

MINING OFFICES, 1, ST. MICHAEL'S-ALLEY, CORNHILL, LONDON.

WATSON AND CUELL, MINE AGENTS.—N.B.—STATISTICAL INFORMATION furnished (on application) to SHAREHOLDERS in MINES in Cornwall, Devon, Scotland, Ireland, Wales, and Spain.

WILLIAM H. SMITH, MINING SHARE AGENT,
10, *WARNFORD-COURT, THROGMORTON-STREET, LONDON.*

WILSON & FRASER, 2, WELLINGTON-BUILDINGS, LIVERPOOL, and 13, EXCHANGE-PLACE, GLASGOW, have always ON SALE PIG-IRON, BAR-IRON, RAILWAY CHAIRS, and RAILWAY BARS.

JAMES LANE, MINING SHARE DEALER,
75, *OLD BROAD-STREET, LONDON.*

BRITISH MINING OFFICES, 41, MOORGATE-STREET, LONDON,—and
4, *STAMP-OFFICE BUILDINGS, MANCHESTER.*
PROSPECTUSES may be had, and SHARES obtained, in the SILVER-LEAD and COPPER MINES connected with these offices, on application to the secretaries, at London or Manchester.
T. H. TAUNTON, London.
W. SHEARMAN, Manchester.

MONEY.—MESSRS. WINSTANLEY & CO., Sharebrokers, inform their friends and the public, they make IMMEDIATE ADVANCES, to any amount, on the deposit of English and Foreign Railway Shares, Scrip, and Debentures, upon exceedingly advantageous terms: they also BUY and SELL every description of STOCK and MINING SHARES, at much less commission than usually charged.
6, Bank Chambers, opposite the Bank of England.

DYFNGWM LEAD MINES, NORTH WALES CONDUCTED ON THE COST-BOOK SYSTEM.
OFFICES—33, OLD JEWRY.
Where sections and plans of the mine may be seen, and all information obtained.

GEORGIA TIN MINES, divided into 2048 shares, and worked *ON THE COST-BOOK SYSTEM.*
The necessary arrangements having been made for carrying out the operations of the company, all future communications are requested to be addressed to the offices of the company, 21, THROGMORTON-STREET, LONDON, where the specimens and plans, with the correspondence, may be seen.

SOUTH WHEAL SOPHIA MINING COMPANY. In 256 shares, of £8 each.
The APPLICATIONS for SHARES in this mine CLOSED on the 28th ult.
Offices, 18, Cornhill. By order, JOHN MARTYN, Purser.

IMPERIAL BRAZILIAN MINING ASSOCIATION, Winchester-house, Broad-street, London, Oct. 1, 1847.—The TRANSFER BOOKS will CLOSE on the 15th inst., and REOPEN on the day after the general meeting, in Nov., of which due notice will be given. GEORGE THOMAS, Acting Director.

TAMAR SILVER-LEAD MINING COMPANY.—Notice is hereby given, that the ANNUAL GENERAL MEETING of the shareholders in this company will be HELD at 44, Finsbury-square, on Thursday, the 21st day of October next, at Two o'clock precisely.—London, Sept. 25, 1847.

TRELEIGH CONSOLIDATED MINING COMPANY.—Notice is hereby given, that the ANNUAL GENERAL MEETING of the shareholders will be HELD at the office, as under, on Wednesday, the 6th October next, at One o'clock precisely. WM. NICHOLSON, Secretary.
57, Old Broad-street, Sept. 14, 1847.

CALLINGTON MINES COMPANY.—At a Quarterly General Meeting of shareholders, held at the offices, 44, Finsbury-square, London, on Wednesday, the 29th Sept., 1847, the following resolutions were proposed and carried unanimously:—
Resolved,—That the reports and accounts, now read, be received, adopted, and entered in the cost and transfer book.
Resolved,—That the thanks of the present meeting be presented to the chairman and directors, for their prudent and vigorous management of the company's affairs.
RICHARD HODGSON, Chairman.

TINCROFT MINING COMPANY.—At a General Meeting of the shareholders of this company, held at the offices, 44, Finsbury-square, London, on Thursday, the 30th Sept., 1847, the following resolutions, being proposed and seconded, were carried unanimously:—
Resolved,—That the reports and accounts, now read, be received, adopted, and entered in the minute-book.
Resolved,—That the thanks of this meeting be presented to the chairman and directors, for the judicious manner in which they have conducted the affairs of this company.
RICHARD HODGSON, Chairman.

TO MINE AGENTS, MINE SURVEYORS, &c.—W. WILTON,
MATHEMATICAL, PHILOSOPHICAL, AND OPTICAL INSTRUMENT MAKER,
ST. DAY, CORNWALL,
Begs to call the attention of MINE AGENTS and SURVEYORS to his MINER'S THEODOLITE, and other IMPROVED INSTRUMENTS, adapted to MINE SURVEYING; and to assure them, that, from many years' constant application of his energies in one of the most active mining districts to this particular branch of mathematical instrument making, he flatters himself he is able to furnish instruments, equal in point of accuracy and workmanship, and superior as regards adaptation to the wants of the miner, to those supplied by almost any other house.
*** A descriptive price list sent free per post, on application.

THE PATENT SAFETY FUSE, FOR BLASTING ROCKS IN MINES, QUARRIES, AND FOR SUBMARINE OPERATIONS.—This article affords the SAFEST, CHEAPEST, and most EXPEDITIOUS MODE of effecting this very hazardous operation. From many testimonies to its usefulness with which the manufacturers have been favoured from every part of the kingdom, they select the following letter, recently received from John Taylor, Esq., F.R.S., &c.:—"I am very glad to hear that my recommendations have been of any service to you; they have been given from a thorough conviction of the great usefulness of the Safety Fuse; and I am quite willing that you should employ my name as evidence of this."
Manufactured and sold by the Patentees, BICKFORD, SMITH, and DAVEY, Camborne, Cornwall.

The highest price ever attained by Bank Stock was in the year 1818, when it touched 292, and the lowest was in 1762, when it was done at 91. The highest amount of circulation was in 1818, when the total was 27,771,000*l.*, and the lowest in 1785, when it was 5,923,000. With regard to the stock of bullion, the *maximum* amount appears in 1844, when it was 15,784,000*l.*, and the *minimum* in 1797, when it was 1,086,000*l.*

THE EXTRAORDINARY EFFICACY OF HOLLOWAY'S PILLS IN THE CURE OF ANOTHER SEVERE CASE OF DROPSY.—The wife of Mr. W. Gardner, of Hanging Houghton, has been most dreadfully afflicted with dropsy—so bad, that she was confined to her bed, and tapped three times in the course of a few months; she then had recourse to Holloway's pills, and, by steady perseverance and a strict adherence to the system laid down in the instructions, the disease was conquered—and, for 18 months past, there has been no accumulation of water; she can walk about with the greatest comfort, and is daily gaining health and strength. These pills are sold by all druggists, and at Professor Holloway's establishment, 244, Strand, London.

UNDER ROYAL PATRONAGE.

KEATING'S COUGH LOZENGES are indispensably necessary, both for the Cure and Prevention of Coughs, Asthmatic, and all Pulmonary Complaints, during this changeable weather.

CURE OF COUGH OF EIGHT YEARS' STANDING, ACCOMPANIED WITH SHORTNESS OF BREATH!

Birkenhead, near Liverpool, Jan. 8, 1847.

SIR,—I have been afflicted with a severe cough and shortness of breath for nearly eight years, and after trying various remedies, did not find myself any better. I purchased a small box of KEATING'S LOZENGES of you, from which I found great benefit. The second box, 2s. 9d. size, completely cured me, and I can now breathe more freely, and am as free from cough as ever I was in my life. Hoping that others, similarly afflicted, will avail themselves of so certain and safe a remedy,

I remain, Sir, yours faithfully, WILLIAM ANDERSON.

To Mr. Geo. H. Howell, chemist, 72, Dale-street, Liverpool.

Prepared and sold, in boxes at 1s. 1½d.; tins 2s. 9d., 4s. 6d., and 10s. 6d. each, by THOMAS KEATING, chemist, &c., No. 79, St. Paul's Churchyard, London.

N.B.—The safety attendant on the use of these Lozenges, together with their agreeable flavour, has given them a well-merited popularity.

SIR JAMES MURRAY'S FLUID MAGNESIA.—Prepared under the immediate care of the inventor, and established for upwards of 30 years by the profession, for removing BILE, ACIDITIES, and INDIGESTION—restoring APPETITE, preserving a moderate state of the bowels, and dissolving uric acid in GRAVEL and GOUT; also as an easy remedy for SEA SICKNESS, and for the febrile affection incident to childhood it is invaluable.—On the value of magnesia, as a remedial agent, it is unnecessary to enlarge; but the fluid preparation of Sir James Murray is now the most valued by the profession, as it entirely avoids the possibility of those dangerous concretions usually resulting from the use of the article in powder, and in the over-dosed liquids of detected imitators.—Sold by the sole consignee, Mr. Bailey, of North-street, Wolverhampton; and by all wholesale and retail druggists and medicine agents throughout the British empire, in bottles, 1s., 2s. 6d., 3s. 6d., 5s. 6d., 11s., and 21s. each.

The Acidulated Syrup, in bottles, 2s. each.

N.B.—Be sure to ask for "Sir James Murray's Preparation," and to see that his name is stamped on each label, in *green ink*, as follows:—"James Murray, Physician to the Lord Lieutenant."

MARKWICK'S PATENT CHEST PROTECTORS.—This season a TRAVELLING CHEST PROTECTOR, to wear over the shirt, will be introduced; and, as it must meet with general patronage, the attention of hosiers and hatters is called to these valuable articles: they are also well adapted for ladies' wear, under a shawl, during damp or piercing cold weather.—MARKWICK'S IMPERMEABLE PELINE is invaluable in cases of gout, rheumatism, tic douloureux, sore throat cold, and also dry hot feet and hands, &c. Socks, gloves, knee caps, head caps, throat protectors, &c., are made from this material, from which any other article may be had, according to the order of the medical or surgical adviser.—Mr. ALFRED MARKWICK'S NEW WORK "ON THE SKIN," just published by the Patent Epithem Company, price 2s. 6d., may be had of all respectable chemists in every town in England.

32, KING WILLIAM-STREET, CITY.

ON NERVOUS DEBILITY & GENERATIVE DISEASES.—Just published, the Thirtieth Thousand, an improved edition, revised and corrected, 120 pages, price 2s., in a sealed envelope, or forwarded, post-paid, to any address, secure from observation, for 2s. 6d., in postage stamps, illustrated with numerous anatomical coloured engravings, "MANHOOD: the Causes of its Premature Decline, with Plain Directions for its Perfect Restoration." A medical essay on those diseases of the generative organs, emanating from solitary and sedentary habits, indiscriminate excesses, the effects of climate, and infection, &c., addressed to the sufferer in Youth, Manhood, and Old Age; with practical remarks on marriage—the treatment and cure of nervous and mental debility, impotency, syphilis, and other urino-genital diseases, by which even the most shattered constitution may be restored, and reach the full period of life allotted to man. The whole illustrated with numerous anatomical engravings on steel, in colour, explaining the various functions, secretions, and structures of the reproductive organs in health and disease; with instructions for private correspondence, cases, &c.

By J. L. CURTIS and CO., Consulting Surgeons, 7, Frith-street, Soho-square, London.

REVIEWS OF THE WORK:—"'Manhood:' a medical work. To the gay and thoughtless we trust this little work will serve as a beacon to warn them of the danger attendant upon the too rash indulgence of their passions, whilst to some it may serve as a monitor in the hour of temptation, and to the afflicted as a sure guide to health."—*Chronicle.* "We feel no hesitation in saying, that there is no member of society by whom the book will not be found useful—whether such person hold the relation of a parent, a preceptor, or a clergyman."—*Sun, Evening Paper.* "Curtis on Manhood should be in the hands of youth and old age. It is a medical publication, ably written, and developes the treatment of a class of painful maladies which has too long been the prey of the illiterate and the designing."—*United Service Gazette.*

Published by the authors, and may be had at their residence; sold also by Strange, 21, Paternoster-row; Hannay, 63, Oxford-street; Mann, 39, Cornhill, London; A. Heywood, Oldham-street, Manchester; Philip, South Castle-street, Liverpool: Campbell, 146, Argyle-street, Glasgow; Robinson, 11, Greenside-street, Edinburgh; and, in a sealed envelope, by all booksellers.—Messrs. Curtis and Co. are to be consulted daily at their residence, No. 7, Frith-street, Soho-square, London; and patients can have this work privately forwarded them, by initial or otherwise, to any part of the United Kingdom, direct from the authors' residence; or from any of the above agents, on remitting 2s. 6d. in postage stamps.

DR. LA'MERT ON THE SECRET INFIRMITIES OF YOUTH AND MATURITY, With 25 coloured engravings.

Just published, and may be had in French or English, in a sealed envelope, 2s. 6d.; or post-free, from the author, for forty-two stamps.

SELF-PRESERVATION: A Medical Treatise, on the Physiology of Marriage, and on the Secret Infirmities and Disorders of Youth and Maturity, usually acquired at an early period of life, which enervate the physical and mental powers, diminish and enfeeble the natural feelings, and exhaust the vital energies of Manhood; with Practical Observations on the Treatment of Nervous Debility, whether arising from these causes, close study, or the influence of tropical climates; local and constitutional weakness, syphilis, stricture, and all diseases and derangements resulting from indiscretion; with 25 coloured engravings, illustrating the Anatomy, Physiology, and Diseases of the Reproductive Organs, explaining their various structures, uses, and functions, and the injuries that are produced in them by solitary habits, excesses, and infection.

BY SAMUEL LA'MERT, M.D.,

No. 9, BEDFORD-STREET, BEDFORD-SQUARE.

Doctor of Medicine, Matriculated Member of the University of Edinburgh, Licentiate of Apothecaries' Hall, London, Honorary Member of the London Hospital Medical Society, &c.

REVIEWS OF THE WORK.

"The author of this singular and talented work is a legally qualified medical man, who has evidently had considerable experience in the treatment of the various disorders, arising from the follies and frailties of early indiscretion. The engravings are an invaluable addition, by demonstrating the consequences of excesses, which must act as a salutary warning to youth and maturity, and by its perusal, many questions may be satisfactorily replied to, that admit of no appeal, even to the most confidential friend."—*Era.*

"Unquestionably this is a most extraordinary and skilful work, and ought to be extensively circulated; for it is quite evident that there are peculiar habits acquired at public schools and private seminaries, which are totally unknown and concealed from the conductors of those establishments, and which cannot be too strongly reprobated and condemned. The engravings that accompany the work are clear and explanatory; and being written by a duly-qualified medical practitioner, will, doubtless, be the means of saving many a youth, as well as those of maturer age, from the various evil consequences resulting from early indiscretions."—*Magnet.*

Sold by Kent and Richards, 52, Paternoster-row; Hannay, 63, Oxford-street; Starie, Tichborne-street, Haymarket: Mansell, 115, Fleet-street; Gordon, 146, Leadenhall-street; or free by post, for 42 stamps, from the author's residence, who may be consulted personally (or by letter) on these disorders daily, from 10 till 2, and from 5 till 8.

Illustrated by 26 Anatomical Coloured Engravings on Steel, On Physical Disqualifications Generative Incapacity, and Impediments to Marriage. New Edition, enlarged to 196 pages.—Just published, price 2s. 6d., or by post, direct from the establishment, 3s. 6d. in postage stamps.

THE SILENT FRIEND: a medical work, on the infirmities and decay of the generative system, from excessive indulgence, infection, and the inordinate use of mercury, with remarks on marriage, and the means of obviating certain disqualifications, illustrated by 26 coloured engravings. By R. & L. PERRY & Co., 19, Berners-street, Oxford-street, London. Published by the authors; sold by Strange, 21, Paternoster-row; Hannay, 63, and Sanger, 150, Oxford-street; Starie, 23, Tichborne-street, Haymarket; and Gordon 146, Leadenhall-street.

PART THE FIRST treats of the anatomy and physiology of the reproductive organs, and is illustrated by six coloured engravings.—PART THE SECOND treats of the consequences resulting from excessive indulgence, and their lamentable effects on the system, producing mental and bodily weakness, nervous excitement, and generative incapacity; it is illustrated by three explanatory engravings.—PART THE THIRD treats of the diseases resulting from infection, either in the primary or secondary form, and contains explicit directions for their treatment. The consequences of neglect, and of the abuse, of mercury are also clearly pointed out. This section is illustrated by 17 coloured engravings.—PART THE FOURTH treats of Perry's Preventative Lotion, by the use of which the dangers of infection are obviated. Its action is simple but sure; it combines with the virus chemically, and destroys its power on the system.—PART THE FIFTH is devoted to the consideration of marriage and its duties. The causes of unproductive unions are also considered, and the whole subject critically and philosophically inquired into.

THE CORDIAL BALM OF SYRIACUM is exclusively employed in treating nervous and sexual debility, impotence, &c., 11s. and 33s. per bottle.—THE CONCENTRATED DETERSIVE ESSENCE, an anti-syphilitic remedy, for purifying the blood in cases of infection, secondary symptoms, eruptions, and the abuse of mercury, 11s. and 33s. per bottle.—PERRY'S PURIFYING SPECIFIC PILLS, 2s. 9d., 4s. 6d., and 11s. per box—a certain remedy in gonorrhœa, gleet, strictures, and chronic inflammation of the bladder.—PERRY'S PREVENTATIVE LOTION, an application to obviate the danger of infection, 33s. a bottle.—Consultation fee, if by letter, £1. £5 packets, with advice, to be had at the establishment only, by which the fee, £1, is saved.—Attendance daily at 19, Berners-street, from 11 to 2, and 5 to 8; on Sundays, from 11 to 1.

Sold by Sutton and Co., 10, Bow Churchyard; W. Edwards, 67, St. Paul's Churchyard; Barclay and Sons, Farringdon-street; Butler, 4, Cheapside; R. Johnston, 68, Cornhill; L. Hill, New Cross; W. B. Jones, chemist, Kingston; J. W. Tanner, Egham; S. Smith, Windsor; J. B. Shilbeck, Bromley; T. Riches, London-street, Greenwich; T. Parkes, Woolwich; Ede and Co., Dorking; and John Thrulby, High-street, Romford—of whom may be had the *Silent Friend.*

THE SILVER AND GOLD MINES OF THE NEW WORLD.

SECOND PART.—ON THE FUTURE PROSPECTS OF THE MINES OF AMERICA, COMPARED WITH THOSE OF EUROPE.—NO. VII.

III. OF THE PRODUCTION OF GOLD AND SILVER IN EUROPE AT THE COMMENCEMENT OF THE NINETEENTH CENTURY.

Europe possesses a very small number of mines of gold and silver. The greater part of the gold she does possess is the produce of washings. Silver ordinarily comes from mines of other metals, in which, to speak metallurgically, it appears as an accidental, or secondary, product. Thus, most of the mines of lead on the continent contain silver; and several of them are only worked to obtain the silver which is found, in small quantities however, united to the lead. The same is the case in a certain number of copper mines. A small portion of gold frequently accompanies the silver.

Since the discovery of America, the decline of the value of precious metals may have been the cause of the abandoning of some European mines, the works of which are attributed by the vulgar to the Romans and Saracens. It must not, however, be believed that Europe produced before the discovery of America more precious metals than she yielded subsequently. On account of the improvement in metallurgic and mechanical arts, the greatest portion of the mines of Europe continued to be worked, and new ones were opened with profit. The researches for precious metals in Europe became more active, in consequence of the fame of the success obtained by the miners in the other hemisphere, and assuredly the production of precious metals in Europe is greater now than it was before Christopher Columbus.

Till within these latter years, Germany, and the rest of the valley of the Danube, had almost exclusively the privilege of producing precious metals in Europe, strictly so called. Bohemia, however, is no longer in the happy times of the mines of Joachimsthal. Saxony,* so learned in the miner's art, and the Hartz Mountains, in which the mines are so interesting, from the sympathetic hierarchy which unites them to each other, from the very summit to the most humble ranks, continue to be productive in silver. So it is in the Tyrol. Hungary, which yields a somewhat large quantity of silver, yields at the same time, in the same mines, including Transylvania, the major part of the gold produced by the European States. Sweden and Norway furnish a little silver, although the mines of Konigsberg have sadly fallen off. England, which digs into the entrails of the earth with so much energy and success, and which possesses admirable mines of copper, lead, tin, iron, coal, counts neither gold nor silver in any appreciable quantity among her productions. Scarcely does Mr. Jacob, in his *Treatise on the Precious Metals,* mention vaguely some mines of the north of England, which yield, as an accessory product, some little silver.

Spain for three centuries ceased to furnish precious metals. The mercury mine of Almaden remained flourishing; but the mines of silver in which Hannibal dug, and which Strabo celebrated, and the mines of gold which, according to the researches of M. Bœkh, had yielded as much as 6500 kilogrammes at the time of the Romans, were abandoned. It was not voluntarily that they were abandoned three centuries ago. They were closed by the order of Charles-Quint, who, in order to obtain for the mines of America the practised miners which they required, put an end, by a decree, to the working of the mines of precious metals in the Peninsula, and it is thus that these magnificent deposits have remained stricken with sterility until within the last few years.

At the commencement of the century, Europe—without Russia, which has no precious metals, except in her provinces of Boreal Asia, if we ascribe to it all the surface occupied by the Oural Mountains—yielded 1300 kilogrammes of gold, and 52,670 kilogrammes of silver. Russia then yielded 627 kilogrammes of gold, and 21,709 kilogrammes of silver.

We should here mention, as far as possible, the production of some other countries, whose precious metals enter, in part at least, in the general commerce. Thus it is right, according to Mr. Jacob, to attribute to the Turkish empire, for its Asiatic provinces, a certain quantity of silver coming from the environs of Erzeroum. It amounts to 100,000*l.*, or 11,245 kilogrammes of pure silver. This silver is sent by caravans to Constantinople, from whence it spreads itself over the general markets. The islands of the Indian Sea have furnished from the oldest time a quantity of gold, which Mr. Crawford, a writer, who has given himself a great deal of trouble to discover the truth, calculates at 4700 kilogrammes. Africa also yields gold from time immemorial. In the interior of Africa there are gold alluvions, which the natives of the country wash as well as they can, and the produce of which is exchanged for manufactures in the counters of the Europeans, or of the Imaums of Muscat. The name of the Gold Coast, that of Guinea, adopted for the old gold piece of money of England, shows that Europe, since she has been in communication with the immense African Peninsula, goes there to seek gold. Mr. Crawford has estimated at 14,000 kilogrammes the gold which is annually produced in Africa. That is certainly an exaggeration; but we are not able to state the exact quantity. We are then reduced to pure conjectures, and it is with a great deal of diffidence that we put down any figure whatever. Let us say, then, that there is reason to believe that this production is more than 4000 kilogrammes.

The countries of the extreme east, at the beginning of the century, yielded no gold and silver. They continually received supplies from the west, which were absorbed as in a gulf. Thus 40 or 50 years ago, the precious metals, which were delivered to the general commerce of the world, may be estimated, in round numbers, at 900,000 kilogrammes of silver and 25,000 kilogrammes of gold, representing, according to the tariff of French money, 200,000,000 fr. for the first metal, and 86,000,000,000 for the second—total, 286,000,000 fr. This mass of metal was produced by the different countries as follow:—

	Silver.	Gold.
America	795,581 kil.	14,118 kil.
Europe	52,670	1,300
Turkey in Asia	11,245	——
Boreal Asia	21,709	672
Islands of the Indian Sea	——	4,700
Africa	——	4,000
Total	881,205	24,790

Thus America entered in the mass of metal which was thrown on the general market for a contingent of 9/10ths of the silver, and of 4/7ths for the gold. It will be seen, that there was a production of 1 kilogramme of gold for 36 kilogrammes of silver, or of 1 fr, in gold against 2 fr. 33 c. in silver. As regards gold, I only present the preceding estimates with great reserve, because they are more conjectural than those which concern silver, especially in the countries out of America and Europe. But, at present, the relations which existed at the commencement of the century are completely changed. It is principally by Russia that the change has been effected, although the decline of the production of silver in America is sensibly felt.

IV. GOLD MINES OF RUSSIA.

The gold mines of Eastern Russia and of Siberia, which have been worked for a few years, yield ever-increasing quantities of metal. The results which they give are easy to ascertain. The Russian Government furnishes to Europe the most detailed information on all that concerns these vast workings, by means of a publication, made periodically at Paris by its official agents, under the title *Annuaire du Journal des Mines de Russie.*

At present the deposits of alluvion gold are, if not worked, at least known to exist, over an immense space. From Kamstchatka and the Oudskoi Mountains, the feet of which are bathed by the Pacific Ocean, to the meridian of Perm at the west of the Ourals, over a distance embracing half of the circle that would be traversed in going round the planet at that height, are groups of land differently divided, but each covering a vast surface, which present auriferous deposits. This zone, extraordinarily long, has an average width of 8° of latitude, or nearly 900 kilometres. The presence of gold on such an extent is one of the most remarkable phenomena which can be pointed out on the globe. It corresponds to the uniformity of the configuration of the regions of the north of Europe and of Asia, which from Behring's Straits, by which the old and the new continents are separated, on the eastern side, up to Picardy, in France, form, so to speak, but a single plain.

It is in favoured points of this vast space that, within the last 30 years, such a quantity of gold has been produced as was entirely unknown. And yet Herodotus, the father of historians, had positively indicated the existence of a great deal of gold in these northern countries, which he called Eastern Europe, and which moderns call Asia. It is in the north of Europe, said he, that there is the greatest abundance of gold. This immense field, in which is now found the greater part of the gold which civilisation receives, is exactly the same as that from which the remotest antiquity obtained its supply of the same metal. It is remarkable that the knowledge of this fact, so calculated, however, to keep alive among people and princes one of the strongest and most indefatigable passions—the thirst for metallic wealth—should have been effaced from the memory of men, in spite of the care which the most classic of historians took to state it in his writings, and that it should come to us by chance, after an oblivion of two thousand years.

One group of gold mines is formed by the circonscription of the Oural Mountains, a grand chain which runs pretty nearly from the north to the south, like the chain of the Andes, and which occupies, between Europe and Asia, a length of about 1900 kilometres. The Oural Mountains are covered with immense forests, adapted to supply all the wants of metallurgy. Mines of iron and copper exist in the mountains, and have been worked for a long time on a grand scale. The alluvions which contain gold and platina are disseminated on the flanks of the chain, and are much richer on the eastern side, than on the European or western.

[*To be continued in next week's Mining Journal.*]

* The metallic deposits of Saxony and Bohemia are in the mountains, called *Erzgebirge.* The dismemberment of Saxony, in 1815, gave a portion of them to Prussia.

THE CHEMISTRY OF THE METALS.

TO THE EDITOR OF THE WOLVERHAMPTON CHRONICLE.

SIR,—With your permission I propose availing myself of the columns of the *Chronicle,* to convey, by a series of papers, an accurate idea of the principal applications and general utility of the metals, and to illustrate, by the aid of chemical theory, the improvements and applications the various processes are capable of, with a view to the improvement of those engaged in the manufacture of them.

St. John's-square, September 27. J. LOUIS JULLION.

INTRODUCTION.

Chemistry is that branch of knowledge which teaches us the properties of elementary substances, and of their mutual combination; it inquires into the laws which affect, and into the powers which preside over, their union; it examines the proportions in which they combine, and the modes of separating them when combined, and endeavours to apply such knowledge to the explication of natural phenomena, and to useful purposes in the arts of life. Most of the substances belonging to our globe are constantly undergoing alterations in sensible quantities, and one variety of matter becomes, as it were, transmuted into another. Such changes, whether natural or artificial, whether slowly or rapidly performed, are called chemical; thus the gradual and almost imperceptible decay of the leaves and branches of a fallen tree exposed to the atmosphere, and the rapid combustion of wood in our fires, are both chemical operations. The object of chemical philosophy is to ascertain the causes of all phenomena of this kind, and to discover the laws by which they are governed.

The transmutation of baser metals into gold and silver, which was the chief, and in most cases, the only object of the genuine alchymists, was not merely regarded as possible, but believed to have been performed by some of the most enlightened chemists of the 17th century; and, in pursuing the history of these transmutations, as recorded by Helvetius, Boerhaave, Boyle, and other sober-minded men, it would be difficult to resist the evidence adduced, without the aids of modern science. Hermes Trismegistus, who is said to have lived in the year of the world 2076, has generally been quoted as the oldest of the alchymists; there can, however, be very little doubt that the writings attributed to him are entirely spurious. The *Tractatus Aureus, or Golden Work,* is evidently a farrago of occult philosophy belonging to a much later period. Hermes, at the outset, is made to apologise for divulging the secrets of the black art. "I should never have revealed them," says he, "had not the fear of eternal judgment, or the hazard of the perdition of my soul, prevailed with me, for such a concealment. It is a debt I am willing to pay to the just, even as the Father of the Just has liberally bestowed it upon me." After this prelude, we might reasonably expect to be let into some of the mysteries of alchymy, but our curiosity is quickly disappointed by finding that they are only to be revealed to the eyes and ears of the sons of the art; "not to the profane, the unworthy, and the scoffers; who, being as greedy dogs, wolves, and foxes, are not to feed on our divine repast." The reader is then conducted into what is termed the "innermost chamber," and regailed with a history and explanation of various matters relating to the philosopher's stone, by means of which, "through the permission of the Omnipotent, the greatest disease is cured, and sorrow, distress, evil, and every hurtful thing evaded; by help of which we pass from darkness to light, from a desert and wilderness to a habitation and home, and from straitness and necessities to a large and ample estate." We are then directed to "catch the flying bird"—by which is meant quicksilver; and "drown it so that it may fly no more:" this is what is afterwards termed the fixation of mercury, by uniting it to gold. It is then plunged into the well of the philosophers, or "*aqua regia,*" by which its soul will be dissipated, and its corporeal particles united to the "red eagle," or muriate of gold. We may, however, close these observations by remarking that all the details bear upon increasing the weight of gold by the influence of mercury; and this will suffice as an example of all the earliest alchymical writers. Geber is another great name in the history of alchymy, though the exact period at which he flourished is unknown; it was probably not later than the 7th century. Some have asserted his pretensions to the possession of the universal medicine, for he speaks of curing disease; but this seems a mere metaphorical expression, relating to transmutation. "Bring me," he says, "the six lepers, that I may cleanse them;" by which he doubtless would imply the conversion of silver, mercury, tin, iron, copper, and lead, into gold, there being only these seven metals known at that period. Dr. Johnson supposes that the word gibberish, anciently written geberish, was originally applied to the language of Geber and his tribe.

The perusal of the histories of transmutation to me bring positive conviction that the whole was a mass of deception and fraud. Sometimes open and intentionally seconded by juggling dexterity; at other times the performers deceived themselves; they purchased what was termed a powder of projection, prepared by the adepts, containing a portion of gold; and when they threw it into the fire with mercury, and found that portion of gold remaining in the crucible, they had not wit enough to detect its source: but the cases which are quoted as least objectionable are often exactly those which are really impossible; I mean where the weight of the gold produced exceeded the weight of the powder and lead employed. The most celebrated history of transmutation is that given by Helvetius, in his "*Brief of the Golden Calf discovering the rarest Miracle in Nature;* how, by the smallest portion of the philosopher's stone, a great piece of common lead was totally transmuted into the purest transpicendent gold, at the Hague, in 1666;" and, as it is a luminous epitome of all that has been done on the subject, an abridgement is well worth perusal:—"The 27th day of December, 1666, in the afternoon, a stranger came to my house in the Hague, in a pleiack habit, of honest gravity and serious authority, of a mean stature, and a little bony face, black hair not at all curled, a beardless chin, and about 44 years of age (as I guess), and born in North Holland. After saluting he beseeched me with great reverence to pardon his rude accesses, for he was a lover of the pyrotechnian art; and having read my treatise against the sympathetic powder of Sir Kenelm Digby, and observed my doubts about the philosopher's mystery, induced him to ask me if I really was a disbeliever as to the existence of an universal medicine, which would cure all diseases, unless the principal parts were perished, or the predestinated time of death come. I replied, 'I never met with an adept or saw such a medicine, though I had fervently prayed for it.' Then I said, 'Surely you are a learned physician.' 'No,' said he, 'I am a brassfounder, and a lover of chemistry.' He then took from his bosom pouch a neat looking box, and out of it three ponderous lumps of stone, each about the bigness of a walnut. I greedily saw and handled for a quarter of an hour this most noble substance, the value of which might be somewhere about 20 tons of gold; and, having drawn from its owner many rare secrets as to its admirable effects, I returned him his treasure of treasures with a most sorrowful mind, humbly beseeching him to bestow a fragment of it upon me in perpetual memory of him, though but the size of a coriander seed. 'No, no,' he said, 'that is not lawful; though thou wouldst give me as many golden ducats as would fill this room, and if fire could be burned of fire, I would at this instant rather cast it all into the furious flames.' He then asked, if I had a private chamber whose prospect was from the public street; so I presently conducted him into my best furnished room backwards, which he entered (says Helvetius) in the true spirit of Dutch cleanliness, without wiping his shoes, which were full of snow and dirt. I now expected he would bestow some great secret upon me, but in vain. He asked for a piece of gold, and opening his doublet, showed me five pieces of that precious metal, which he wore upon a green riband, each being the size of a small trencher. I now earnestly again requested a crumb of the stone, and, at last, out of his philosophical commiseration, he gave me a morsel as large as a rape seed; but I said this scanty portion will scarcely transmute four grains of lead. 'Then,' said he, 'deliver it me back:' which I did, in hope of a greater parcel; but he, cutting off half with his nail, said, 'even this is sufficient for thee.' 'Sir,' said I, with a dejected countenance, 'what means this?' and he said, 'even that will transmute half an ounce of lead.' So I gave him great thanks, and said I would try it, and reveal it to no one. He then took his leave, and said he would call again at nine o'clock the next morning. I then confessed that, while the mass of his medicine was in my hand the day before, I had secretly scraped off a bit with my nail, which I had projected on lead, but caused no transmutation, for the whole had flown away in fumes. 'Friend,' said he, 'thou art more dexterous in committing theft than in applying medicine; hadst thou wrapt up thy stolen prey in yellow wax, it would have penetrated and transmuted thy lead into gold.' I then asked, if the philosophic work cost much, or required much time, for philosophers say that 9 or 10 months are required for it. He answered that their works were only understood by the adepts, without whom no student can prepare this magistry. 'Fling not away, therefore, thy money and thy goods in hunting out this art, for thou shalt never find it;' to which I replied, 'as thy master showed it to thee, so mayst thou perchance discover something thereof to me, who know the rudiments, and, therefore, it may be easier to add to a foundation than begin anew in this art.' Said he, 'it is quite otherwise; for unless thou knowest the thing from head to heel, thou canst not break open the glassy seal of Hermes. But enough, to-morrow, at the ninth hour, I will show thee the Manuel of Projection.' But Elias never came again; so my wife, who was curious in the art thereof the worthy man had discoursed, teased me to make the experiment with the little spark of bounty the artist had left me; so I melted half an ounce of lead, upon which my wife put in the said medicine: it hissed and bubbled, and in a quarter of an hour the mass of lead was transmuted into fine gold, at which we were exceedingly amazed. I took it to the goldsmith, who judged it most excellent, and willingly offered me 50 florins for each ounce." Such is the celebrated history of Elias, the artist, and Dr. Helvetius.

The foregoing may be taken as a type of the whole class of alchymists, who believed in transmutation; a class of men who laboured on, through years, without once gaining an approximation to the end of all their studies, and who, in the emphatic language of Spenser, were doomed—

"To lose good days that might be better spent,
To waste long nights in pensive discontent;
To spend to day, to be put back to-morrow,
To feed on hope, to pine with fear and sorrow;
To fret their souls with crosses and with care,
To eat their hearts through comfortless despair.
Unhappy wights! born to disastrous end,
That all their lives in tedious toniness spend."

It was the greatest folly to persecute these men for their abilities and genius, but when they confidently asserted their ability to transmute lead into gold, people might well say that they had dealings with that—

"Chief of many throned powers
That led the embattled seraphin to war."

That they were men of genius is visible to this day. All our alembics, crucibles, and stills were in common use among them; all the alloys of the seven metals they were also acquainted with; they are well represented by the old poet in the fable, who left an estate to his children, buried somewhere or other, he told them, in his vineyard, which they, therefore, fail to dig with great diligence, whereby, though they found no gold in substance, yet they received a better vintage for their labour. Thus it was with the alchymists: they did not find gold, but they laid the foundation for the science of chemistry, the importance of which applied to metallurgical operations I will proceed to discuss in my next paper.

HOT BLAST, AND SAVING OF FUEL.

[From the *Birmingham Journal.*]

In the *Mining Journal* of the 3d July last, there appeared an announcement of a new method of heating air for blast furnaces by their waste heat, patented by Messrs. Dixon and Budd, and successfully carried out in its application to six blast furnaces at Ystalyfera, near Swansea &c. The statement excited much interest—meeting the approbation of some, and the disapproval of others. Since that period, Ystalyfera has been visited by the writer, and, after rigidly examining the said patented stoves for hot blast, the least that can be said of them is, that the patentees' statements, in their enumeration of the superiority and advantage of their stoves to all others, are unanswerably demonstrated by the existence of the fact. Passing by their minor properties, their great excellencies consists—first, in requiring no fuel, as they are heated by the superfluous combustible of the blast furnace; and second, in requiring no labour, no one to attend them—as stoker, firer, teaser, or overman—and yet preserve a higher and more equal temperature than any other kind of hot-air stove whatever, whilst they endure longer, with less repairs. Many have ingeniously employed the waste heat of smelting furnaces to various purposes, such as calcining of iron ores, cementation of steel, calcining of lime, burning of bricks, carbonising wood, refining iron, heating reverberating furnaces for puddling, and for the rolling mill, &c., and all these have their merits and demerits; but the more recent application of it to heat the blast is the most natural, simple, and perfect. It is one of the most valuable accessions to the little accumulating stock of modern improvements in the economy of metallurgical operations, and ranking superbly high among the many desideratums long wanted to complete the blast furnace. Nor is the mode of its application anything less than consummate simplicity, and, therefore, superlative perfection. Difficult, as it undoubtedly is, on starting a new project, to remove all radically-rooted prejudices, yet that difficulty becomes facile, when and where such project becomes no longer problematical, as all prepossession necessarily concedes to the all-prevailing force of stubborn facts. The patented hot-air stoves in question are only wanted to be seen, known, and understood, in order to be universally approved, admired, and adopted. Their own existing merits will, unshackled, self-proclaim their unanswerable superiority to all precedents, till their intrinsical excellence eventually supplants all others. Indeed, so adapted to its end is this unparalleled modification, and so self-evident its super-excellence, as to induce the beholder irresistibly to yield his acquiesence, and voluntarily tender his warmest avowal of its decided superiority, dilate on its properties, and patronise it with zeal and assiduity; whilst the real genius and sincere lover of improvements will hail it as another addition of inestimable value to modern meliorations, and the metallurgist duly appreciate its worth, and unhesitatingly participate in its transcendant advantages. However, the sooner this and other modifications are introduced to our blast furnaces, &c., the sooner will the iron-master be able to place iron in the market at a price to compete with that coming from any other part of the world, entering our ports free of duty. It is a fact fully ascertained, that more than one-half of the calorific effect of the fuel used in most blast furnaces is lost, or wasted, in the gaseous flames, variously composed of carbonic acid, carbonic oxide, hydrogen, nitrogen, ammonia, light carburetted hydrogen, olefiant gas, carburetted hydrogen of unknown composition, and sulphuretted hydrogen, issuing from their craters. Hence arises the great necessity of employing some means of bringing into use this waste combustible with economy and success. And what is so natural, easy, effectual, and economical, as its application to heat the air for the blast furnace? Still, however, as these gases contain a large per centage of carbonic oxide, and an essential proportion of hydrogen, the former being always at least about half the amount of the same gas found in the bottom of the boshes and top of the hearth, where its greatest volume is obtained; and, as this is the great reducing agent, it follows that it may be successfully and economically employed in either another blast furnace, or to any other metallurgical operation. And thus the fuel may be carbonic oxide, with a little hydrogen contained in the gas coming from the mouth of the blast furnace, and burnt by a proper supply of air. Moreover, when we bear in mind that from 70 to 75 per cent. of the combustible of the blast furnace is lost at its crater, it is very easy to conceive that by applying it to the steam-engine boilers, it would generate more steam than the blast-engine would require. And for all these purposes, where the furnace is built beside a cliff or steep precipice, the gas may be conducted through an horizontal flue; or, in situations where this mode is infeasible, it might be brought a few yards down the side of the furnace, as at Ystalyfera, into the hot air stoves, and returned or carried off in a chimney raised somewhat higher than the tunnel-head; or it may be drawn down to the earth's surface, as at Wasseralfingen, in the kingdom of Wurtemburg, and then be ignited by the admission of a little atmospheric air, hot or cold. The high price of fuel, and the rapid haste of many of our coal beds to complete exhaustion, loudly calls for greater frugality in that indispensible commodity. And, considering the enormous waste of heat in all our iron-works lavished against brickwork, and thrown into the air, not only at the blast furnace, but also at the hot-air stoves, foundry stoves, cupolas, air furnaces, refineries puddling furnaces, mill furnaces, coke kilns, coke fires, mine kilns, &c., there is ample room for a vast of saving in fuel. Nor do I hesitate to say that, were all the known modifications and contrivances for the saving of fuel put into universal practice; and, indeed, the period is not far distant when the economy in the article of fuel used in metallurgical operations will amount in value to the present profit of many ot the iron-works.—BENJAMIN DAVIS: *West Bromwich.*

THE DEFENCE OF THE COUNTRY.—Mr. John Weale, the bookseller, of Holborn, has addressed a letter to Lord John Russell, as the first Minister of the Crown, "On the Defence of the Country, and the Expediency of Training, as Auxiliaries, Able-bodied Male Persons applying for Parochial Relief,"—the basis of which is the uncertain state of the political affairs of Europe, which, the author considers, calls for immediate attention, not only to those international relations which at present exist, but also to the contingencies which may hereafter arise. Mr. Weale (whether justly, or no, we will not stop to inquire) is apprehensive, that France, with a population so fond of military exploits, and long cherishing the hope of retaliating upon us, will one day make a descent upon our coast, and that, from our growing weakness on land, we should, in case of the invasion of England by a powerful army, be totally unable to gather a tithe of the force necessary to repel the intruder. The author is, doubtlessly, graphically correct in his description of the present position of France, and the efforts she is making to fortify her coasts, and increase her steam navy; and that while she has an internal standing army of fully 300,000 men, England has a disposable army of only 20,000 men, without militia, or any military organization, with her coasts entirely unprotected. To remedy this state of things, Mr. Weale recommends that every able-bodied person, of 5 feet in height, and not more than 45 years of age, should be trained to military exercises—a scheme which he considers would involve, both an improvement in the condition of the pauper, and a very important service to the State. The machinery for working out the system of training is ingenious—the plan for working out the defence of any attempt to invade London from the southern coast equally so—and, to those who make political economy their study, the pamphlet will be read with much interest. Irrespective of the utility, or feasibility, of the scheme, Mr. Weale deserves full credit for the spirited manner in which he has brought his suggestion forward—the pamphlet being illustrated by an excellent map of the railways of England, Ireland, and Scotland, and a full-length portrait of "a navvy," sketched on the Great Northern.

THE LATE FATAL ACCIDENT ON THE SOUTH COAST RAILWAY.—The inquest on the body of Samuel Gregory, who was killed by the engine, which he was driving, running off the line in Sadler's Coppice, on the 31st May, was resumed, for the fifth time, at Nutbourn, on Tuesday last—the first adjournment having been made for the purpose of procuring evidence. the latter owing to the illness of a juror.—Mr. Ellis, the West Sussex coroner, having read over the evidence, the foreman of the jury, Capt. Allen, R.N., expressed his regret, that the company's servants should, by taking the engine to pieces, have prevented the jury from having the benefit of an examination by an engineer of their own appointment. The room having been cleared for about a quarter of an hour, the foreman read the verdict of the jury, to the effect, "That deceased was killed by the engine running off the line; that the said engine was subject to considerable oscillation, which gave it an undulating motion; but whether the engine left the rail in consequence of such motion, or from what cause, no evidence appeared to us. We also recommend to the directors of the Brighton Railway Company, that engines, such as No. 40, should not be used in future for passenger traffic." Mr. Faithfull, solicitor to the company, stated that such engines were not now used for passenger trains; and that although the company now carried 3,000,000 passengers per annum, no fatal accident had happened to a passenger since the first week of the opening of the London and Brighton Railway, some years ago.

THE GREAT WELSH COLLIERY CASE.

IN THE MATTER OF THE ARBITRATION RESPECTING THE MOSTYN COLLIERIES, NORTH WALES.

[*Continued from last week's Mining Journal.*]

John Lancaster, of Wigan, Lancashire, examined by Mr. COWLING.—Witness stated, that he is a coal viewer of very considerable experience, and is viewer and part owner of the largest in Lancashire. He had examined the Mostyn Collieries, at the request of the plaintiff, and condemned the mode in which they had been worked. He attributed the thrust to the fact, that the collieries had been worked with too much regard to present profit. The working of the barrier left in 1838 he considered highly improper, and reckoned that as a great contributory cause of the thrust. He strongly objected to the practice of getting at the deep coal by means of downhills from old crosses. The condition of the engine on the surface he had particularly examined; he found the safety-valves very heavily loaded, the cylinder showed a movement at each rise of the piston-rod, and the engine-house suffered great vibrating action. He knew of no remedy for the injuries the colliery had suffered besides the new winning, the cost of which he considered to have been stated at a moderate sum. As to the royalty, he said there were no exemptions by any custom in the trade—such things were always the subject of special arrangement between lessor and lessee.

Cross-examined by Mr. ATHERTON.—Creeps are of frequent occurrence in some parts. The coal is nearly all got underhand; we then get as much coal as we can; but, where the surface is valuable, or there is water above, crushes are guarded against with every precaution. Had known slight crushes worked through. Had known a crust solidize; it stands, as it were, on a pivot, and, if you touch it, you hasard a continuation of the crush. If a road were made through the coal, it would be more expensive ultimately than the new winnings. Had known stone and bricks employed in erecting an artificial wall, but it had failed. The cause of a crush is removal of the base of the support to the weight.

John Thomas Woodhouse, of Leicester, examined by Mr. CROMPTON.—Witness is a coal viewer in very extensive practice; is viewer to the Duke of Portland, the Duke of Devonshire, and the Duchy of Lancaster. He had examined these collieries for the plaintiff, and condemned the mode in which they had been worked, on the same grounds as the preceding witnesses. The remedy of a new winning was the only one of a really useful description that could be devised, and was the cheapest—he pointed out the objections which existed to any other mode of attempting to overcome the mischief. The excessive substraction of coal, and the insufficient protection left, he considered very improper; and the working of the barrier, left in 1838, he regarded as being suicidal—he confirmed the moderateness of the charge made for the new winning. As to the question of exemption from royalty, he stated that there was no usage known to him, the parties on either side always taking care to have that matter provided for in their agreement.

Cross-examined by Mr. ATHERTON.—Has worked under navigable rivers, and under canals; the course adopted with reference to the canals is this, an understanding is come to with the proprietors, and the canal is kept up, or not, accordingly. Water acting on a soft floor, might produce a creep. The removal of too much coal is the general cause. Considered the crush in question would take many years to subside. Had known instances, where the bottom of the river was mud, that holes caused by crushes had filled up. Witness knew an instance, at Overseal, of a crush going on for 15 years.

James Bromley, of Wednesbury, Staffordshire, examined by Mr. COWLING.—Witness is coal-viewer to the Duke of Sutherland. He had examined these collieries, at the request of the said plaintiff; and he condemned the mode in which the works had been conducted. Excessive excavations and insufficient supports, were the chief objections to the defendant's proceedings, and these acts had led, in his conviction, to the former thrusts of 1837 and 1838. That of October, he attributed almost wholly to the cutting up of the pillar left after the crush of 1838; and he compared the effect upon the superstratum, which would be produced by its removal, to the effect which the withdrawal of the legs of a table would have upon its leaves. He stated, that in Staffordshire creeps were frequently not cared for, because the mines were under dry land, and the surface not valuable; but where any valuable property was standing on the surface, great precaution was taken, by leaving sufficiently strong pillars to protect and support the upper stratification, and prevent any thrust or creep. In the case, however, of the Mostyn Mines, it was of the highest moment to keep the surface sound, because of the great danger of introducing the sea. He had considered every mode of remedying the evil, and could only approve of the new winning, which he deemed the cheapest, and the only secure one. The present engine was much too heavily loaded, and the shaft was in bad order. He considered the cost stated for the new winning as being moderate. No usage was known in the trade of exemption from royalty on coal consumed by the colliers, or in the ways in question, the subject being, on the contrary, always regulated by agreement.

Cross-examined by Mr. ATHERTON.—My reason for saying that too much coal has been taken, is, that I see the crushes, and there does not appear to exist any other cause. He mentioned an instance, where it was important to preserve the surface, that it had been agreed between all parties that 50 per cent. of coal should be left, but that proved to be insufficient. In Staffordshire, those colliers were considered the best who took away the most coal, provided that the surface is dry land, and of no value. The instance named, was the only one he remembered of failure to keep up the surface when wanted, except in the case of a manufactory over a colliery, about 20 years back—there it was agreed to leave 50 per cent., but it did not answer. If there were no water over Mostyn Colliery, I would, if I had to work them, go and remove every piece of coal I could get—working from the deep—and if the roof fell in afterwards, no harm would be done, as the surface would be valueless.

John Orme Brettel, of Dudley, examined by Mr. CROMPTON.—Witness is coal-viewer to the Duke of Cleveland, and has had extensive experience in mining. He had examined the collieries, at the request of the plaintiff, and he expressed similar objections to the mode in which they had been worked as the other witnesses. He laid great stress on the removal of the barrier left after 1838, as being highly injudicious and imprudent, and as being the proximate cause of the last thrust. He explained the nature of the watery sand-bed pervading the South Stafford coal-fields, and pointed out the extreme caution adopted there to prevent that body from gaining entrance to the mine, although, with ordinary surface land, crushes were not much regarded. That where sufficient pillars were left, no crush need ever be apprehended. He considered the new winning to be the only useful remedy, and the cost moderate. He confirmed the other witnesses, as to the absence of any usage in the trade respecting exemption from royalty on coal consumed by the colliers and others, the parties always abiding by their agreement.

Cross-examined by Mr. ATHERTON.—In our neighbourhood crushes repeatedly occur, and the works are built up with stone walls. We get out all the coal we can, except in cases where there are valuable buildings on the surface, or there is danger of the said water coming in, and we then take every care to prevent a crush.

William Watson, of Byer's Green, Durham, was called, but not examined, the plaintiff's counsel declining to tender any more scientific evidence from the north.

Edward Davies, of Whitford, Flintshire, examined by Mr. COWLING.—He stated that he had formerly worked in the Mostyn Collieries, had afterwards become a charter-master, and was now viewer and part owner of the Llanassa Mines. When a charter-master, he had worked the three-yards coal, in the 100 fathom level, at Mostyn, under the defendants. They made a contract with him for a certain price, he being allowed to excavate 6 yards out of every 10 yards, leaving 4 yards standing. That some time afterwards, a fresh contract was made with him, whereby his price was reduced. That whilst working under this second contract, the crush of 1837 took place, occasioned by the pillars being left too weak. That after a time the crush subsided, the works were opened, and witness recommenced operations; but in 1838 another crush came, from the same cause as the former one. In both cases the crush had extended upwards to the surface, and brought in the sea. That of 1838 was cleared through, and witness was set to work again, and continued working at this seam for several years. Before, however, beginning again after the crush of 1838, a large pillar, or field, of coal was left at the end of the crush, to support the works, and to protect the new ones from the crush. This had succeeded. He detailed a conversation he had had with one of the defendants, shortly after the crush of 1838, in which witness had been scolded for bringing on these troubles; but he excused himself, by saying his labourers were forced to work away all the coal they could get, to make up for their reduced wages, and that the defendants' steward ought to have properly looked after the works. He had recently been down into the mine, and seen the spot where the block had been left, but there was no block now—the defendants having worked it. This he considered highly improper, and to have been the cause of the crush of 1846. He stated, that the pillars were not left of the strength agreed upon, but that many of them were but 1 yard, 1½ yard, 2 yards, and 3 yards thick, while the wickets were 7 and 8 yards wide.

Cross-examined by Mr. ATHERTON.—No one told me to work the pillars less than the size agreed upon. I did not cut the coals—my labourers did. The fault lay between the cutters and the defendants' steward. It was to my profit to have as much coal got up as possible. I never objected to the pillars being so small.

Thomas Humffreys, of Rhewl, Flintshire, examined by the ATTORNEY-GENERAL.—Witness stated, that he had worked at the Mostyn Collieries, under the defendants, and in the beginning of 1846 commenced working the block of coal left after the crush of 1838, in the three-yard coal. He did so by direction of defendants' steward, and continued working at it till a few weeks before the crush. He described the effect of his first working upon the block, and stated, that after he had cut a little way into it, there was a great noise, as of weight coming on, and the bottom part of the block, beneath where he had cut, was raised up and broken into pieces. That next morning he found that part fallen in. He believed the working of this piece had produced the last crush.

Robert Morris, of Llanassa, Flintshire, examined by Mr. CROMPTON.—This witness had worked at Mostyn as a collier, had become charter-master, and was now manager and part owner of the Llanassa Colliery. He deposed to the state of a portion of the mines, known as the Thomas Pit and the Roger Pit, which the defendants had left off working; and stated that there were great quantities of coal still there, which could be worked to profit. He had had great experience as to the manner of working collieries under the Dee, having been assistant manager of a colliery at Bagillt, which ran under the river; and he showed the quantity of coal excavated there to have been much less than in the collieries at Mostyn.

Peter Williams, of Rhewl, Flintshire, examined by Mr. COWLING.—He was a charter master, in the defendants' service, and was called to prove that he had worked the five-yard seam of coal, and that many of the pillars there were left only 1 yard, 1½ yard, 2 yards, and 3 yards thick, the wickets being 6 yards wide, and more. He also spoke of the state of the pits which the defendants had discontinued working, and described them as containing large quantities of coal.

Cross-examined by Mr. ATHERTON.—It was not my duty to see that the pillars were left of the proper width. I only found men to work the coal. It was the duty of the defendants' steward to see that the works were executed properly.

James Pearce, of Mostyn, engineer, was called to prove the state of the engine, the quantity of water coming into the mine before and after the crush, and that it came from the sea. He proved, that in 1837, 1838, and 1846, the crush in the three-yard coal had extended to the surface, that a depression had simultaneously taken place in the bed of the river, and that a great influx of water had followed.

John Davies, of Whitford, was called to prove that he had been a clerk at the Mostyn Collieries, under the defendants, but had left their service. That coal was consumed by the colliers on which no royalty was paid to the plaintiff; that the colliers paid 4s. per ton for the coal so supplied them and carried it away at their own expense. That many of the workpeople were allowed coal, and it was reckoned as part of their wages, but no royalty was paid thereon. That on coal consumed by the furnaces, smithies, and engines, no royalty was paid. That on coal supplied to two of the defendants, no royalty was paid.

Thomas Roberts, of Whitford, was called, to prove that he had worked for the former witness, Edward Davies, in the three-yard coal, 100 yards level, and he confirmed that witness's testimony.

Several colliers were called, for the purpose of proving facts in confirmation of the testimony of preceding witnesses; but as there was nothing new in this evidence, it is unnecessary to be detailed.

John Bewley, of Liverpool, accountant, was called, for the purpose of proving, that upon examination and comparison of a variety of facts, the royalty unaccounted for would, according to his process, amount within a small sum to that stated by Mr. Daglish, as the result of his experiments and calculations.

Maurice Scanlan, of Bermondsey, London, examined by Mr. CROMPTON.—Witness stated, that he is a chemist, of considerable experience. That he had, at the plaintiff's request, proceeded to Mostyn Collieries, and had taken samples of the water in different parts of the mine, as well as from the sea. He had analysed the water by the ordinary tests on evaporation, and found that one specimen, where the colliery was under the land, was fresh water; that another was slightly impregnated with sea-water; and that two specimens, obtained as near the crushes as he could get, were exactly similar, in all respects, to the specimen of sea-water. The result was, in his judgment, that the water at the crushes came from the sea.

Cross-examined by Mr. WELSLY.—I never before examined water in a coal mine. Independently of the close resemblance of the analysis, I have no other means of judging that the water at the crushes comes from the sea—except its situation. If this water had years ago come from the sea, and lain in fissures, it is quite possible that it should have retained its specific gravity and saline matter. The fresh water, I consider, comes from land springs; it comes in small quantities. I did not find phosphate of iron in the sea water: I did not look for it. I believe it is not found in the best analysis given. I know nothing of it.—A paper was handed to witness by defendants' counsel, being another analysis of the water, which represented it to contain phosphate of Iron. Witness observed, that that analysis was of 10,000 grains of water, and that the proportion was only of 1-10th of a grain in 10,000, which was going to an amazing diminution. Chloride of sodium and of magnesia are the principal parts of sea-water. The phosphate, in the minute proportion stated, may have been acquired in passing over the strata; but it is not unlikely, the sea-water might contain some, because you have organic matter.

This concluded the plaintiff's case.

[*To be concluded in next week's Mining Journal.*]

THE RAILWAY CLEARING-HOUSE SYSTEM.

The railway clearing-house system, the operation of which has tended in a very important degree to the simplification of the railway system itself of this country, has recently been extended to the transmission of goods and the recovery of lost luggage. The clearing-house system is but imperfectly understood by the public. The great object of its promoters has been, and is, to give to the traffic operations of the various companies who possess lines of railway in connection with each other all the simplicity which almost necessarily belongs to the management of a single establishment. Those persons who formerly posted their through journeys will painfully remember the discomforts of a change of carriage every, 8, 10, or 20 miles, and what a relief it was to have appropriated to their accommodation a chaise that was being returned to the town to which they were themselves proceeding. Now, the primary object of the clearing-house system is to send, to the greatest possible extent consistent with the proper working of a railway, not only passengers, but goods through, without change of carriage or truck. Much difficulty was experienced, not in devising, but in inducing the various railway companies to adopt means for perfecting the clearing-house system. One company, better supplied than another with stock, would, in the absence of an almost perfect and stringent code of regulations for enforcing an equitable arrangement in the interchange of carriages and trucks, be naturally inclined to retain and work for the longest possible period a certain portion of the stock sent over their line by their neighbours; and this evil, as well as the difficulties arising from the different modes in which the several companies kept their accounts, and the very complicated character of the transactions, could, it was obvious on reflection, be remedied only by the removal of all immediate control from the companies themselves over the operations of the system. In fact, it was found that demurrage and other disputes between officers, each desiring to do what he thought most conducive to the interests of his company, would be as interminable as they were numerous, and hence arose the conviction of the necessity, which was shortly followed by the establishment of a central clearing-house. To this office all the returns of monies received as fares for passengers, or charges for goods passing over lines other than those belonging to the company at whose stations they may take the rail, as well as of the numbers of the carriages and trucks by which such passengers and goods proceed over the neighbouring line or lines in their through journey, are forwarded daily. The accounts are compared, and balances struck, and received or paid, as the case may be, precisely in the way that the business of the City clearing-house is transacted. We believe that the conviction of the necessity of this plan was first felt by Mr. Morison, the present manager of the central clearing-house at the Euston-square terminus, and that to him and Mr. G. C. Glyn, Mr. G. Hudson, Mr. Robert Stephenson, Mr. Creed, Captain Huish, and Captain Lawes, who all gave their powerful assistance to the matter, the public are chiefly indebted for the benefits that are unquestionably conferred, not only on the railway companies themselves, but on the whole of the travelling community, by the present very efficient clearing-house system.

The means adopted for enforcing the earliest possible return of carriages and trucks to the companies to whom they belong is a very simple and effective one. At each junction—that is, where the line of one company runs into that belonging to another company—is stationed an officer who notes down the numbers of the carriages that are taken through. These numbers are forwarded every day to the clearing-house, and to prevent the use of such trucks or carriages between points within any two of such junctions, a demurrage of 5s. or 6s. per day is charged for detention beyond a certain fixed period, such demurrage being just high enough to act as a penalty on the detaining company. The public usefulness of the clearing-house system will be best understood by a simple statement—viz., that in the year 1845, the number of first-class passengers booked through on the railways with which the clearing-house is connected, was 234,010; the number of second-class, 215,297; and of third-class, 68,581. The average mileage of each passenger was 146 miles; the average length of the railways connected with the clearing-house 41 miles, and the average number of junctions passed by each passenger, 3·61. The numbers of loaded carriages, trucks for private carriages, horse boxes, post-offices, and goods waggons which went through on the same lines in the same year, were as follows:—Carriages, 59,765; trucks for private carriages, 5813; horse boxes, 7573; post-offices, 2607; goods waggons, 180,606.

The advantages of the clearing-house system have been enjoyed by the railway travellers of this country for several years past; but it is only very recently that the system has been extended to the carriage of goods and the recovery of lost parcels. For the former advantage—the extension of the system to goods traffic—the country is chiefly indebted to Captain Huish, the able manager of the London and North-Western Railway. The difficulty he had to contend with was the want of a certain classification of the goods. The obstacles that presented themselves in the way of the accomplishment of so desirable a simplification of railway traffic were many and not insignificant; but Capt. Huish persevered; and he now has the pleasure of witnessing the very beneficial extension of the clearing-house system to the goods traffic carried on throughout the continuous narrow-gauge lines north of the Thames. The whole amount received for goods conveyed over two or more lines connected with the clearing-house is now divided on the simple principle of a mileage rate. For instance, a ton of goods passing from London to Edinburgh will run over the lines of four or five independent companies. By a certain fixed classification of goods, however, and the extension of the clearing-house system to this species of traffic, the freight is charged throughout, and divided between the companies. On this principle the gross return being forwarded by the clerk of every station on each line direct to the clearing-house, that establishment immediately subdivides the receipt and apportions a mileage receipt to the respective companies over whose lines the goods have been conveyed. By this means all accounts between the companies are avoided, every monetary transaction being passed and settled through the clearing-house.

The next useful extension of the system has been to the recovery of lost luggage. When any article of luggage is left at any station on a line in connection with the clearing-house, a printed form is immediately forwarded to the clearing-house. The articles are registered, and on application at the clearing-house, the article which may have been lost at Birmingham, Manchester, Liverpool, Leeds, York, Carlisle, or Newcastle, is instantly traced and delivered over to the owner.—*Morning Herald.*

PATENT FORGE AND FAN BLAST.—Lieut.-Col. Dundas, C.B., director of the foundry department; Lieut.-Col. Gordon, director of the carriage department; Lieut.-Col. Colquhoun, of the same department; and Major Palliser, of the proof department, assembled at Woolwich Dockyard, on Wednesday last, to witness experiments with Mr. Haig's patent forge and fan blast, for producing great heat with manual labour only. The first experiment was made to ascertain its capabilities compared with the common smith's bellows and forge attached to the troops of Royal Horse Artillery and field batteries, when employed in active service; and it was shown that Mr. Haig's plan was not only efficient for all that the bellows and smith's forge could accomplish, but its far greater advantages were shown by a broken iron axle of a field carriage being brought to an excellent welding heat, and welded in 25 minutes. A similar result could not have been effected with the usual smith's forge. The next experiment was made in the dial square of the foundry department, two of Mr. Haig's machines being placed adjoining a furnace for fusing iron or cast metal—one of the machines being worked by a lever handle, and the other by a crank handle. An excellent casting was soon obtained, and the crank handled machine shown to be the best and easiest worked. An experiment also took place to ascertain the efficiency of the fan blast in making shot red-hot, and in eight minutes 12-pounders were made red hot, and ready for firing. The invention is very portable, and suitable for ships and war steamers, and will be a great advantage in the field, and at foreign stations, where small parties of artillerymen are detached.

DE HAVEN AND UMHOLTS' COAL BREAKERS.—Messrs. De Haven and Umholts have recently patented a new and very ingenious mechanical contrivance for breaking coal. The machine is extremely simple in its construction, perhaps the most simple among the various machines which have been invented within the few years past, and applied to the same purpose. It consists of a single cylinder on rollers, about 4 ft. long, and 36 in. in diameter; this cylinder is formed of cast-iron segments, furnished with cast lugs or teeth, and perforated with square openings or holes about 3 in. long on the inner sides, between the teeth. The teeth are placed at intervals of about 1 ft., and are about 3½ in. long; they operate so as to cut, rather than crush the coal. This roller works against, or rather within 3 in. of a cast-iron plate, which is made slightly convex, and perforated with square openings similar to those in the rollers, and of the same size—the plate is placed perpendicularly. The coal passes from the shute into the breaker at the top of the rollers, and can only escape from the breakers either though the perforations in the cylinder, or in the plate, or between the rollers and the plate—consequently, it must be regularly cut or broken into marketable sizes before it gets into the screen. The advantages claimed for this breaker over all others is—first, it can be put up much cheaper; second, it can be kept in repairs with less expense; third, it makes one-third less waste; and fourth, it will break more coal with a third less power. Mr. G. Spencer, M.G., and P. Heilner, and Dolbin and Rogers, have these breakers now in use; and I believe Caleb Parker, also, has one of them at his colliery on Silver Creek. I have seen two of them in operation, and assured by the gentlemen at whose collieries I saw them, that they are superior to any of the old breakers. They tell me, that a 5-horse engine will, with one of these machines, break 250 tons of coal per day; this, however, is, I judge, simply a conjecture based upon the results of their own machine, which is driven by much heavier power. Each of the gentlemen referred to have used, and are now using, at other collieries, breakers of an earlier patent, and are fully competent to pronounce upon the relative merits of the different machines. I rely, therefore, upon their assurances, more than upon my own judgment.—*Miners' Journal.*

A LARGE LOT.—The *Philadelphia Ledger* says the Mount Savage Iron-Works are to be sold, on the 9th of October, under execution, at the suit of the English bondholder and others. The property consists of a rolling-mill, 200 by 175 ft., furnaces, &c., on the largest scale, a railroad nine miles long, about 5000 acres of land, valuable for their coal, iron ore, and fire-clay, and for farms, various buildings and improvements, including 280 houses personal property.

Mining Correspondence.

ENGLISH MINES.

BARRISTOWN.—We are getting on well in sinking the shaft on the Slob; it is now down between 10 and 11 fms. We sunk through the lode; it has a north underlay, of about 1 ft. in 6 ft.; the present ground in the shaft is hard, and requires to be blasted: we hope to communicate this shaft with the 18 fm. level within the next month (October). The men, in the 18 fm. level end west, are preparing to rise against the Slob shaft; in the winze, sinking in the bottom of the 18 fm. level, the lode is still improving—about 1 ft. wide, and worth 9l. per fm.; this is the most encouraging feature we have yet seen in depth. The rise over this is much the same as last reported—worth about 8l. per fm.; the men employed in clearing the bottom stopes, under the 18 fm. level, on the part of the main lode dipping west, have recovered the lode, and are likely to have a productive pitch of lead. In the 18 fm. level end, east of flat-rod shaft, we have a lode of white iron, 3 ft. wide, with spots of ore only through it—dipping east 5 ft. in a fathom. The 12 fm. end is still in ground without the lode; the stopes in the bottom of this level (the middle lode) are worth about 10l. per fm. As soon as the present gale subsides, we shall ship our lead, which is now ready, and about 40 tons. We have a prospect of getting the next cargo in quicker time than the present one.—Sept. 25.

BEDFORD UNITED.—At Wheal Marquis, the lode in the sump-winze is worth from 80l. to 90l. per fm.; and in the bottom level east, the lode is worth 60l. per fm.; the south lode, in this level west, is worth 30l. per fm. There has been no lode taken down in the 80 fm. level east; the lode in the western winze, in this level, is 18 in. wide, composed of mundic, spar, and good spots of copper ore. In the 70 fm. level east, the lode is 2 ft. wide—good work. At Liscombe, the lode in the adit level east is 2 ft. wide, composed of spar, mundic, and ore; and in the rise, in this level, the lode is producing good stones of ore. There is no alteration in the 25 fm. level, east of the south engine-shaft, or adit level east, on this lode.—Sept. 28.

CARMARTHEN CONSOLS.—Since my last report, we have driven the deep adit 22 fms., and have about 8 fms. more to drive, to reach the bottom of the old workings, where there is a most productive lode gone down—we hope to effect this in about a month. We have cleared the shallow adit about 50 fms., and find a good branch of lead standing, where the backs are not worked away. At Nant, the lode continues just the same—about 5 ft. wide, composed of gossan, barytes, and lead. We shall ship some barytes for market in a few days.

CASCADE.—We have costeaned 70 fms. north from the river Lyd, and, at the point of 40 fms., have cut another promising lode, 1 ft. wide—I think it is the north one on the plan in the Parrom Wood. From a vein in the river, and another at the head of the coppice, south of the river, I have broken stones containing spots of copper ore, rich in quality—this confirms my opinion, that it is a mine of high promise. I shall drive the cross-cut, or adit level, 20° west of south, and, in a few fathoms, I expect to find the cross-course—this will save several fathoms in driving to intersect the lodes; it is also a convenient place to put the stuff and make a dressing-floor. We have commenced opening the adit level with 6 men.—Sept. 29.

COATLITHE HILLS.—The level, east from A shaft, has been driven about 3 ft. during this week. The vein in the end has improved in appearance since I last wrote, being now composed of rider, or veinstone, clay—occasional stones of ore. The horse level men have been employed, during this week, in rising up in the back of the level, to endeavour to let the water down from the shaft, it delaying the working very materially.—September 25.

CUBERT.—The ground in the engine-shaft continues hard and spare for sinking—sunk below the 35 fm. level, 4 fms. 5 ft.; in the 35 fm. level, driving east, the lode is 1 ft. big—soft spar and a little lead; in the same level, driving west, the lode is 3 ft. wide; we consider it very promising, worth about half a ton of lead ore in a fathom. The lode in the 25 fm. level east is 18 in. wide, and yielding stones of ore; the lode in the same level, going west, is very kindly, and worth nearly a ton of lead per fm. The new whim shaft and plat, in the 15 fm. level, is completed, and that level set to drive west; the lode there is 3 ft. wide, and will produce about one-third of a ton of lead ore per fathom. We have been costeaning about 40 fms. to the west of our western new shaft, and have discovered the back of Trebiskin lode, which is a pretty-looking gossan, about 20 in. wide, and will produce very rich stones of lead. We intend continuing the costeaning still further west.—Sept. 24.

DEAN PRIOR AND BUCKFASTLEIGH.—Having taken a careful survey of all the works now in operation at this mine, I beg to inform you that it is progressing orderly; and, so far as prudence will allow of its being done on the system, I think that it will prove satisfactory to all parties. The new wheel-pit is in a regular course of building, with masonry of durability: I expect it will be finished in a short time, as more hands can be put on, the foundation being laid, and brought to such height, as to admit the men to command the walling, at the same time, without impeding each other. The axle of the wheel is replete with the different parts connected therewith, ready to be affixed on the completion of the wheel-pit—therefore, no delay will arise on that head. I should advise you to use every effort in your power, both in the shaft and at surface, to get things prepared for the immediate construction of the 24-ft. wheel, for the purpose of drawing the stuff and crushing the ore: as I hinted in my last report, it will be desirable to press on that work more particularly at surface, before the rainy season sets in—that no delay may be occasioned for vigorous prosecution in sinking the shaft, &c., when you get the power applied to carry out your operations effectually. The lode in the deep adit level, west of shaft, still continues regular, composed of spar, prian, gossan, and a small portion of mundic. I think there is a greater probability of getting ore in the deep level, as you extend west; for the lode possesses stronger indications of mineral. I should also recommend the driving east a few fathoms in the 50, as the workings above clearly show a large quantity of ore must have been extracted from that part of the mine. Therefore, it is possible a shift between the shallower and deep levels might have taken place, to divert the course of the ore. It apparently looks farther east, as, from the last five or six fathoms' driving, the lode is more collected than before; and I think, from some branches which struck off at the shaft, that there is every chance of their uniting ere long—if so, there is a fair reason to presume that they will make ore, as the ground is stained with an oxide which emanates from minerals, and frequently shows that such indications are the forerunners of good courses of ore: though this is no certain rule, yet it is a criterion by which we can form an opinion that it is preferable to pursue such indications.—Sept. 25.——Saturday last, being the monthly setting day, the arrangements made were as follows:—The bottom level was set to drive east of the engine-shaft 2 fms., at 4l. 4s. per fm., by two men. In order to prove the lode to that level, and at the same time to have men to put in timber, to secure the 10 fm. level and the whim-shaft, and also to put in some bed-plants or casing, we have taken out the men from the 20, 10, and deep-adit levels, to do the necessary work, and also to excavate the wheel-pit for the 24-ft. wheel, so as to get the walls all ready to remove this wheel, as soon as the new 40-ft. wheel is put to work. I expect that the masonry for the walls of the new wheel-pit will be completed in about nine or ten days, when we shall commence putting the wheel together with all possible speed. The price for excavating the wheel-pits for the 24-ft. wheel is 4s. 8d. per solid fm., by 10 men.—Sept. 27.

DEVON AND COURTENAY.—The lode in the end driving west, in the 30 fm. level, is 2 ft. wide, composed of branches of spar and mundic, mixed with some killas, and good stones of ore interspersed throughout the lode; in the end driving east, in this level, the lode is 3 ft. wide, composed almost entirely of mundic and peach. In the deep adit level the lode is 2 ft. wide, principally spar, with small branches of lead ore in the killas, under the lode. The pitch in the shallow adit level, on the north lode, is looking well. The shaftmen are, I think, making better progress this month than for any previous month since they commenced sinking under the 30 fm. level. I have set a level, to drive east of the flat-rod shaft, on the north lode, to two men, at 2l. 2s. per fm.

DRAKE WALLS.—Brenton's engine-shaft has improved in sinking—very good branches of tin; the stopes, east of Brenton's, are producing good work; also, the 40 fm. level, east of Brenton's, the ground is hard; the stopes, both east and west of machine shaft, are producing good work. The 33 fm. level, and stopes behind the end, are very good. I believe we have in all 20 tons of tin broke at this time; but I fear our next sampling will not exceed 14 tons, in consequence of our not having sufficient water to draw stamp to dress. We have cut another lode, in costeaning north, from the lode Mr. Johnson saw near the Tamar; it is 12 ft. wide—4 ft. of which, on the south part, is of a promising appearance, good gossan, and studded with mundic and copper. We have two men sinking on its course, and two men costeaning further north. Our new engine-house and stack are raising fast. I hope it will be ready quite in time to heave the engine in when it arrives.—Sept. 26.

DYFNGWM.—In the west stopes, in the 22 fm. level, we have cut one fathom of ground, which is worth 13l. per fm. for lead—this stope is looking well, and I have no doubt but it will increase in value in the next month; in the stopes east, in the 22 fm. level, we have cut 1 fm. 4 ft. of ground, which is worth 14l. per fm. for lead; in the stopes east (No. 2), in the 22 fm. level, we have cut 1 fm. 5 ft. 10 in. of ground, which is worth 6l. per fm. for lead; in the east end, in the 22 fm. level, we have driven 1 fm. 0 ft. 4 in. through oreyground, with every indication of our having a course of ore in the next month. In the stopes east, in the 16 fm. level, we have cut 1 fm. 3 ft. of ground, which is worth 10l. per fm. for lead; in the stopes west, in the 16 fm. level, we have cut 1 fm. 5 ft. of ground, which is worth 16l. per fm. for lead. I intend, in a few days, to ship about 20 tons of lead. I have also divided the lead cut by the former company, which I estimate to be 10 tons still unwashed. I am happy to state, on the whole, our mine has greatly improved in the present month; and, from the indications, we shall be able to fully bear out all our former calculations. It was impossible for me to extend our operations in the middle of the month (Sept.), as I had set the bargains some time before. In the present month (Oct.), we doubled the number of hands, and intend to work the mine with the greatest alacrity.—Sept. 27.—[The foregoing report is far more favourable than could have been expected. The mine improves at every step the miners make—daily unfolding its wealth, and assuring us of its extent and value.]

EAST CROWNDALE.—The ground in our engine-shaft has improved for sinking within the last two days, having got through the spar branches on to clear killas ground. During the last week, we passed through several small branches of ore, from which we have broken some stones, of excellent quality—these are good indications with regard to our main lode. The shaft in the north lode, at Rix Hill, is holed to the adit level; we broke some good tin-stuff in holing. The adit level, at this place, is at present poor, although it is evident we are near another branch of tin—the character of the lode being quite congenial for tin; it is 2½ ft. wide, composed of peach, prian, mundic, capel, and good stones of ore at times. We have set to cut plat; so soon as this is done, we shall begin to sink below the adit level. I expect we shall get the whim at work on the shaft, next week, which will effect a great saving in shifting the stuff. Our engine and pit-work is in good order.—Sept. 25.

EAST TAMAR CONSOLS.—Saturday being our setting day, we set the 60 fm. level to drive north and south; the lode in each end is 2½ ft. wide—fluor-spar and ore—the best lode to commence driving on since we began sinking the shaft. The lode in the 54 north is 20 in. wide, composed of spar and ore—saving work; the lode in the same level south is 2 ft. wide—fluor-spar and ore—a very kindly lode. The lode in the 46 north is 2½ ft. wide—saving work; the lode in the same level south is 18 in. wide—spar and ore, and is looking more promising than when last reported on. At Charlotte's, the lode in the shaft, under the 11 fm. level is 2 ft. wide—fluor-spar and ore—a very kindly lode. The lode in the 11 fm. level is 2 ft. wide—saving work. I am happy to say, our pitches in this part of the mine are looking more promising than ever. If the steam-whim was in course of working, it would reduce our cost 25l. per month.—September 28.

GREAT MICHELL CONSOLS.—The lode in the 35 fm. level, east of the engine-shaft, is without alteration—still 7 ft. wide, composed of spar, mundic, and good stones of ore; in the same level, west of the shaft, the lode for the width of the end (about 5 ft.) consists of mundic and spar, and, in places, good stones of ore; in the same level, west of the sump-winze, the lode back from the end, where cut through, is about 4½ ft. wide, and has produced some rich stones of ore; but in the present end the lode is improved, the part now being carried for 2½ ft. wide contains mundic, peach, fluor-spar, and ore, and is turning out some good saving work. The winzemen are still engaged cutting the plat, which will be completed in the course of the present week.—September 28.

GREAT WHEAL MARTHA.—The lode in the 40 fm. level, going east, is 6 ft. big, composed of mundic and spar, with copper intermixed, and more orey than last reported; we have, also, met with heads, composed of white prian, with copper ore—these are favourable indications. The lode is improving; and the ground is much better for driving.—Sept. 25.

HEIGNSTON DOWN CONSOLS.—The few following memoranda, in respect of the progress and prospects of this concern, are intended for the guidance of the adventurers, to be assembled at the meeting, on Monday next, in coming to a tolerably correct conclusion on such subjects. The comparatively limited scale of the company's operations, as yet only admissible in the pursuit of the various contemplated objects, owing to the existing impediments of want of water for the engine, pumping, handling, and stamping purposes—of which you are fully cognizant, by late advices thereon—will necessary preclude anything like a lengthened report. Before we furnish you with the proposed few particulars, in regard to our proceedings and prospects as above intimated, we cannot refrain from saying, that the clear view we have of this concern to a certainty becoming a permanently profitable one, and that, too, upon but, comparatively, little more of outlay, and within little more time, will facilitate exceedingly our performance of that portion of our report which is to have reference to the state present and prospective of the concern. Since the commencement of the company's operations, our main engine-shaft (Bailey's) has been sunk, made good and complete for all its required objects, to a depth of 35 fathoms from the surface; and is still in course of most active progress for the accomplishment of 3 fms. deeper, at which depth it is intended to have diverges both east and west, in the course of the lode, for its further and more effectual development, and upon which there cannot be a doubt, from what has been seen and realised from this lode at the various points of operation above, and to be presently described, that very considerable success will reward such deeper trial. The lode at the present deepest point of the shaft in question, we are happy to be able to state, is between 5 and 6 ft. wide, composed for the most part of gossan, of the most splendid character, indicating, in the most certain way possible, great and continuous courses of copper ore below, and, in our opinion, at no great depth, the same gossan being intermixed with spar of a highly congenial nature, carrying together in places tolerably good work for tin ore. In addition to such encouraging, and, in fact, certain, indications, the gossan referred to shows a good deal of the same sort of mineral (copper) greens as that of the Wheal Josiah, underneath which there is being at present realised such great and lasting runs of ore ground. In the 20 fm. level, we have driven, in all, westward, about 50 fms. on the course of the lode, which, on an average throughout the drivage, may be said to be about 3 ft. wide, although in places making full 5 and 6 ft. wide. In the present end, we are happy to be able to state, that the lode is wearing an exceedingly promising aspect, being about 2½ ft. wide, composed, for the most part, of equally fine gossan, as above referred to, and carrying very good work for tin. In the back of this drivage, we have now working, and have had for many months past, as you are aware, a tribute pitch, by 6 men, and the which has turned out considerable quantities of good tin-stuff, as now to be witnessed at grass; this pitch has already been proved for about 20 fms. in length in the level, and about 3 fms., on an average, in the back, where, at the extreme points reached, the lode is continuing to yield remunerative returns to the company, and good wages to the tributers—we believe, in their tribute, 7s. 6d. in the 1l. In this level, east of shaft, we have cleared and driven in all about 50 fms.; and, for the most part, the lode has been showing an exceedingly promising character, carrying good work for tin at various points in as beautiful a gossan as any met with elsewhere in this concern. The gossan here, also, shows when at grass, upon exposure to influences of atmosphere, great readiness to decompose and oxidise in same way as already intimated; much of same strong mineral copper greens, which, in a word, is nothing more or less than the oxides and sulphates being decomposed, and held in solution by natural precipitants. In a word, we have no hesitation in saying, that we are not only fully confident, but also are quite certain, in our own minds, that such evidences as those, to which we have been directing your attention, are in connection with, and, in fact, arising from, rich and lasting runs of ore at no great depth below; in the back of this (20 fm. level), eastern drivage, we had nearly omitted to state, that there is also a tribute pitch in operation by four men, at 10s. in the 1l.; this ground has also been proved to be holding in length for 20 fms., and up in the back, on an average, for about 4 fms., the stuff from which (and now at surface), with the rest from the other parts of the mine, will turn out tolerably good work for tin. Judging from the immense heaps of stuff (tin work) at surface, we are inclined to believe, that we have altogether nothing short of 3000l. worth of tin in such accumulations; and, in addition to which, we may, with an equal degree of correctness, estimate our tin ground, standing at our different points of exploration in the mine, available for tribute returns, whenever required, at about 6000l., taking such ground for similar length as gone through, and proved in the 20 drivage east and west from shaft, at only one-half the depth reached below in the shaft. From the foregoing few explanatory details, it will be properly and safely inferred, that in this concern we have already realised the most certain evidences of its being easily rendered a good and lasting source of profitable returns to its proprietary; it is, however, to be clearly inferred also, from the foregoing opinions, that the ulterior position we contemplate for the concern, is, when it shall become, as it most certainly will, one of the most lucrative copper mines of the country. We have not thought it necessary to again remark upon the merits and recommendations of the other numerous lodes generally of this great mining property, having acquitted ourselves before now, and frequently, of that duty. Suffice it to say, that on bringing the lode referred to into profitable play, so as to furnish resources therefrom for other trials, there are not wanting many lodes of high promise for profitable employment of capital upon an extended scale; and, moreover, it is to be again stated, that one of the most promising lodes of which we have cognisance, is within the most facile distance for most effectually accomplishing the trial thereof by some machinery, and mediums of shafts, cross-cuts, &c., as we have almost already available; from this lode, at only about 13 fms. from surface, where we cleared down into and sunk a little below the old men's workings, we have had, as you are already aware, rich stones of grey ore, some of which were upwards of a dozen pounds in weight, and, altogether, in their general character such as to indicate that they belonged to no unimportant deposit below. Looking at these circumstances, therefore, without anything like sanguine expectation, we cannot but believe that in the concern we have been directing your attention to in the few foregoing hastily and imperfectly written remarks, the proprietors have, undoubtedly, an exceedingly valuable property.—Sept. 25.

HOLMBUSH.—The diagonal shaft is sunk 11 fms. below the 120 fm. level, in the bottom of which there is a beautiful white killas strata—the ground being more favourable for sinking at present than it has been for the above-mentioned depth; the lode in the 120 fm. level, west of the great cross-course, is 12 in. wide, composed of spar, mundic, and spots of ore. The lode in the 110 fm. level south is 20 in. wide, composed of flookan and stones of lead, very congenial for that mineral, and favourable for driving; the rise, above this level, is communicated to the 100 fm. level, thereby ventilating the same, and facilitating the driving. The lode in the 100 fm. level south is 2 ft. wide, composed of spar, flookan, and lead, worth 12l. per fm., with a beautiful white killas strata on each side, in which we anxiously look for the Flap-jack lode to be intersected; one of the pitches, in the back of this level, is rather improved; the others are still producing a moderate quantity of lead ores. The lode in the 90 fm. level is 2 ft. wide, composed of flookan and stones of lead; ground favourable for driving.—Sept. 28.

ILAM.—In the end, driving to the north of Robins's, to cut the perpendicular lode, the lode is small, and not much ore. In the 67 fm. level, east of the shaft, the lode is large, and very kindly—price for driving, 6l. per fm. In Robins's shaft, sinking under the 67 fm. level, the lode is just the same as when I last wrote to you—price for sinking, 7l. 5s. per fm. In the cross-cut, driving towards Brown's shaft, in this end, I believe we have cut the water, or let it down in Brown's shaft. As the water in the shaft is 12 ft. lower, I would recommend drawing out the water in the shaft; and I am of opinion that we can sink Brown's shaft dry. The price for driving is 6l. per fm.—Sept. 27.

KIRKCUDBRIGHTSHIRE.—The lode in the 50 fm. level, driving west, is 4 ft. wide, producing half a ton of lead per fm. The lode in the 40 fm. end west is 5 ft. wide, producing half a ton per fm.; the other part of the lode, taking north, is 3½ ft. wide, producing 15 cwts. of lead per fm. the stopes, in the back of this level, are looking exceedingly well. The lode in the 30 fm. end west is 4 ft. wide, but poor for lead at present; the stopes, in the back of this level, are looking well, producing 1 ton per fm.—the same will apply to the rise in this level. The lode in the 20 fm. end west is 3 ft. wide, and worth 25l. per fm. for lead; the stopes, in the back of this level, are not quite so good as last reported. Other places of operations are looking well; and, on the whole, our prospects are very encouraging.—Sept. 25.

LEWIS.—The 60 east is still looking very well; I think it is better to-day than I have seen it for the week. The ground in the 60 cross-cut, west of sump whim shaft, is harder than I have seen it since the commencement, but a very promising shaft for tin. The lode in the 50 east is 5 ft. wide, worth 6l. per fm., and very promising; the lode in this level, on the south branch, is 1 ft. wide, worth 12l. per fm., and very kindly. The lode in the 80 end east is 10 in. wide, and very much disordered at present. The lode in Praed's shaft, sinking below the 20 fm. level, is 5 ft. wide, worth 5l. 10s. per fm., and very encouraging. I thought, last week, our tributers at the back of the 60 and 50 would do well (that is, on the north lode), but, since then, they have not looked so well. The back of the 50, on the south branch, is looking very well, where we have set four men, on tribute, at 1s. 4d.; but, to get wages, they should have 2s.—the men cut it below the fixed tribute; there are two men, at the back of the same level, at 6s. I think the prospects, generally speaking, are very cheering.

MENDIP HILLS.—I have the whole of our surface men employed in excavating the foundation for the engine-house, &c., some part of which we find to be rather hard for removing, which will, in some measure, retard our progress; however, no time shall be lost in getting it accomplished, as fast as the nature of the ground will admit of. In consequence of the machinery not arriving at Bristol as expected, I was not able to get it on the mine last week; I am now glad to inform you, part of it has arrived there, and arrangements made to bring it home this evening. Very little alteration has taken place in the appearance of the lode in the 38 fm. level during the past week; it continues about 2 ft. 9 in. wide, composed of flookan, spar, &c.; in the winze sinking below this level, we are down about 14 fms., where the lode is 2 ft. 6 in. wide, composed of quartz, flookan, and limestone.—September 27.

SILVER VALLEY.—We have finished cutting the shaft plat, and shall be prepared to begin to sink at the latter part of the week. The lode in the east and west ends, in the 50 fm. level, has not been taken down since last reported on. At the silver mine, in Oak shaft, we are continuing to drive east and west, between the gossan and the flookan, carrying a part of both; the gossan in both ends is 18 in. wide, accompanied with stones of carbonate of iron. The lode in the 30 fm. level end west is still in two branches; the hanging-wall branch is 9 in. wide, consisting of much mundic, associated with peach, carbonate of iron, and spots of silver-lead ores; the footwall branch is 6 in. wide, principally flookan. The lode in the 20 end west is 18 in. wide, composed of flookan, soft spar, carbonate of iron, peach, and mundic, with occasional small veins of silver-lead ores; the lode in the rise, in the back of this level, is producing some work, which will pay for dressing; the lode in the stope, in the bottom, is producing a little silver-lead ore, and occasionally stones of grey and native silver.—Sept. 29.

SOUTH TAMAR UNITED.—The shaftmen are busily engaged fixing the plunger lift at 80 fm. level—which work will be completed by to-morrow morning. The men in the adit level have cleared 140 fms. north from the Monday's shaft. The air being very foul, I have put the men to clear the 80 fm. level south from the engine-shaft; which will enable us to take up a great deal of water at this level—so that it will not require so large a lift under it, as the workings are not so extensive.—Sep. 28.

SOUTH WHEAL MARIA.—The lode in the 20 fm. level, west from the engine-shaft towards the caunter, has very considerably improved in the course of the last week; it is from 2 ft. to 2½ ft. big, composed of mundic, prian, &c., with strong yellow ore throughout; it carries a regular leader on the north wall, with very little underlay, about 3 in. big, solid; I am led to believe, from its present appearance, that it is the back of a good deposit. The ground in the north cross-cut is more favourable for driving; it is now 20 fms. from the shaft, and there is about 10 fms. more to drive to intersect the next lode in this direction. We are costeaning for the lode in Wheal Williams's flat-rod shaft, where it is promising to be very productive.—Sept. 30.

SOUTH WHEAL TRELAWNEY.—We have sunk the engine-shaft (in the last month) 4 fms. 2 ft. 6 in., and made it all complete; the shaft is now 12 fms. 6 in. below the adit level—the ground in which is as favourable as we wish to see it; the water is very moderate indeed, and the engines work well. The men having taken the lift of 10 fms. to sink, of course will go on with their contract, as usual—commencing their work on Monday mornings, at 1 o'clock, until 10 o'clock on Saturday nights; and, should the ground continue as at present, we have every reason to believe the shaft will be sunk at the same rate as stated above.—Sept. 25.

TAMAR SILVER-LEAD.—In the engine-shaft the lode is 15 inches wide—6 in. of which are good saving work. In the 160 end, south of the shaft, the lode is 2 ft. wide, composed of spar and ore, saving work; in the same level north the lode is 1 ft. wide, composed of capel and ore, but not rich for the latter. In the 145 end south the lode is 2½ ft. wide, containing flookan and ore; in the same level north the lode is 1 ft. wide, at present poor. In the 135 end the lode is 3 ft. wide, composed of can and ore, very good work. In the 125 end the lode is 1 ft. wide, with some good stones of ore. At North Tamar, the lode in the 70 end is 3 ft. wide, with two good branches of ore. In the 60 end the lode is 2 ft. wide, composed chiefly of can and mundic, with some good work. Our survey-day being on Saturday, the 25th instant, it went off with great spirit, three of the pitches being taken at 1s. 4d. in the 1l. Our mines are looking better than they have for some time past. We hope to sample on Friday, the 1st October, about 85 tons of ore.—Sept. 27.

TRELEIGH CONSOLS.—Christoe's shaft, below the 110 fm. level, we shall continue for 9 or 12 ft. in depth, and fix a lift of pumps in this level, which will require about three weeks; in the 110, east of Christoe's, the lode is 8 in. wide, without mineral; we shall cross-cut south in this level in search of more lode; in the 110, west on cross-course, the cross-course is 2½ ft. wide, the ground favourable for driving. In the 100, east of Garden's, the lode is 3 ft. wide, with a very favourable appearance, and stones of ore; in the 100, west of Garden's, the lode is 2½ ft. wide, hard, and but little mineral. In the 90, west of ditto, the lode is 15 in. wide, worth from 6l. to 8l. per fm.; the rise, above the 90, is holed. In the 80, west of ditto, the lode is 20 in. wide, worth 8l. per fm.; in the 80, east of ditto, the lode is 2½ ft. wide, worth 80l. per fm. In the 70, west of ditto, the lode is 2½ ft. wide, with a very kindly appearance, producing only stones of ore. In the 60, west of ditto, the lode is 3½ ft. wide, and has a very kindly appearance, with stones of ore; the winze below the 60 west is suspended. In the new shaft, for Wheal Parent lode, the ground is favourable for sinking. In the adit east, on Parent lode, the lode is 2½ ft. wide, and it is producing good stones of ore, but not to value. We are clearing and securing flat-rod shaft, on the main lode; this was formerly the east shaft in Wheal Mary, now near the boundary of both setts. The sinking the shaft below the adit, on Wheal Parent lode, is suspended; sunk to water.—Sept. 24.

WEST WHEAL JEWEL.—In the 57 fm. level, east of Williams's cross-course, on Wheal Jewel lode, the lode is 15 in. wide, worth 7l. per fm. In the 30 fm. level, west of Quarry shaft, on Tolcarne tin lode, no lode taken down in the past week. In the 12 fm. level, west of Quarry shaft, on the same lode, no lode taken down in the past week; in the rise, in the back of the 12 fm. level, east of Quarry shaft, on the same lode, the lode not taken down in the past week. In the adit end, west of Quarry shaft, on the same lode, the lode is 1 ft. wide, worth 10l. per fm. In the stopes in the bottom of the adit, east of Pryor's winze, on the same lode, the lode is 18 in. wide, worth 18l. per fm. In the shallow adit, west of Quarry shaft on the same lode, the lode not taken down in the past week.—Sept. 27.

WHEAL ADAMS.—The lode in the western rise, in the 50 fm. level, is at present hard and disordered, and we have commenced driving east to intersect the middle lode, as described in our report of the 14th inst., for the purpose of draining the winze in the 40; our progress, however, is slow, owing to a deficiency of air, and we are, consequently, anxious to effect a communication as speedily as possible. The jack lode, left by former workers to the north of our rise, we have taken away, and have commenced stoping to the south, where the lode is 6 ft. wide, consisting of quartz and black jack; we expect to reach another deposit of brown jack in about a week—for, although the former produces the greatest per centage of metal, the latter is preferred by the party for whom we have been raising it. The stopes in the 40 have been poor during the past week; but they are again improved, and producing the usual quantity of saving work. The ground in the end, extending north-east from the new engine-shaft, continues very favourable for driving. Several veins of blende, lead, and black oxide of copper have been intersected since our last report, and these are dipping towards the lode, presenting favourable indications. The western silver-lead lode, south of Woon's cross-cut, in the 28 fm. level have been but partially worked, owing to the tributers considering the ground not to be sufficiently productive to remunerate them for their labour; this, however, was not our opinion—consequently, we fixed them to stope it on tut-work, and it will now set in about 7s. in the 1l.; the ground will be forthwith timbered, and, in about a week, it will be in a proper working order. In clearing deads (refuge) from the 28 fm. level, for the purpose of examining the gossany and copper parts of the lode, we discovered a quartzose vein, varying from 6 in. to 6 ft. wide, traversing nearly north and south, on which the gossan rests; it has, it appears, been cut through in several places, and in all of them considered worthless—it has been called the mundicy branch, which mundic has been found to be granular galena, &c., coloured by the decomposition of iron and blende ores. We have discovered a continuation of this vein in the 40, and we have no doubt but it reaches below this level. The quantity of ground standing is not known, being buried by hundreds of tons of attle, which, of course, will require time to remove, but that we have seen will pay well for taking away. We are now engaged in removing deads, and hope soon to be in a position to increase our returns. The communication, however, with the 40 and 50 must not be lost sight of, as no ore has been raised from the latter level since March month last, owing to the crush which took place in April, and which has been a most unfortunate drawback to raising ores.—Sept. 28.

WHEAL BARBARA.—The lode in the east end is much improved, and the stratum, in which the same is embedded, is much more congenial for metal—and I think, from present indications, that we shall very soon be raising ore; west end much the same as when I reported last.—Sept. 27

WHEAL TRELAWNEY.—The shaftmen are cutting a tip plat, at Phillips's shaft. The lode in the 52 end south is without alteration; this level north is

worth 12*l.* per fm. The lode in the 42 end south is as last reported; the same level north is worth 12*l.* per fm. The 32 end north is improved, and worth 8*l.* per fm. In the winze, sinking under the 22 fm. level, the lode is large, and worth 10*l.* per fm. There is no material alteration since my last, in the stoping department. At Trelawney's and Vivian's shafts, I cannot speak of any change of consequence. We sampled, yesterday, a parcel of ore, computed at 72 tons.

FOREIGN MINES.

AUSTRALIAN MINING COMPANY.—Extracts from correspondence:—"*Tunghillo Mines, May* 19.—In the bottom of the 30 fm. winze, on Baker's lode, we have cut a vein of ore of decidedly better quality than any we have hitherto found; I am not, however, in a position to speak very confidently, as, immediately upon striking the ore, I have been obliged to stop the working—the winze being down to the level of the cross-cut; and until that has been driven home, which I hope will take place in two months at the farthest, I am unable to prove the lode any further. The 20 fm. level, upon Baker's lode, has also much improved. The level upon Anstey's lode, driving south from the Creek, is completed to Hart's winze, and a winze has just been commenced below that level; the lode is looking decidedly better as we descend; the mine, generally, looks more promising than I have yet seen it. The bearer of this will give you some stones of ore, which I broke from the larger rocks, in the bottom of the 30 fm. winze, on Baker's lode."

Extract from Mr. Solly's letter, dated 23d February, 1847.—"*Tunghillo Mines*:—Baker's lode is looking better, being all but solid, and nearly 2 ft. thick—that is to say, a leader has come in in the middle of the lode, which is 4 or 5 feet wide, nearly 2 ft. thick, and full of ore, though not clean and solid; and I think it improves going down. However, I hope, by next survey day, to be able to speak more decidedly."

At the board of the committee of management, the 9th March, 1847, Mr. Baker reported that he had visited the Tungkillo Mines, on Friday last (setting day)—that all the work was taken at prices, rated to be about 30*s.* per man per week—that he had surveyed all the workings, and considered them proceeding in a very satisfactory manner, in particular with reference to Baker's lode; although it is not looking so rich, as described by Mr. Solly, in his letter of 23d February, yet it is now looking well; and the captain on the mine estimates that the lode in its present state will yield two tons of 28 per cent. ore per fathom of ground.

IMPERIAL BRAZILIAN MINES.—*Gongo, July* 13.—I am sorry to say, that Gongo Mine is without a single novelty. At Bananal, our operations have been delayed by one of the old pumps, which we were using, having leaked; we have now replaced it by one of our own, and within two days we hope to see the gold vein. To this object all our labours have been directed; but as soon as it has been effected, we shall immediately take steps to reach other parts of the mine, which are reported to have been left rich, the parties having been driven from them by the crushing of the openings they had made.

July 23.—I am sorry to say, Gongo Mine presents nothing new. At Bananal, our English houses are completed, and in a few weeks more a convenient washing house and store, labourers' cottages, and a feitor's residence, will be ready. For sake of economy and expedition, we are dismantling one of the houses at Socorro, the materials of which will be very serviceable in our new erections. I left the mine two days since, when it was drained, cleared, and repaired to within 3 ft. of the bottom. As might have been expected, the gold was extracted as far as possible; we have, therefore, to excavate the rock before we can conveniently touch the vein. I return to Bananal immediately, taking this letter open with me, and I will add news to the last instant in a postcript. My recapitulation is ready, but I wait to add a line, respecting the vein at Bananal, before I forward it.

P.S.—*Bananal, July* 24, 2 *p.m.*—I have this moment left the bottom of the mine, and embrace the last instant to which I can detain the postman. We have worked on the vein at the bottom about 24 hours, and I have left it as rich as I ever saw it in its former owner's time. We have not the means of washing what we have taken out in these 24 hours, but Capts. Pengilly and Guy concur with me in estimating it at from 16 to 20 lbs. weight of gold. The productive part is from 5 to 6 ft. long, and 3 or 4 in. wide, and the portion we have excavated is about 2 ft. in depth. It will take us two or three days to secure the ground we have gone through, but we hope to work on the vein again on or before the 28th instant, when I will write again. I purpose addressing you by every five days' post, whilst matters require it; and, on this occasion, I forward a duplicate, or rather a separate, letter for a different vessel from Rio. You may confidently rely on our doing our utmost to give good and early returns. Gold return from the 1st to 22d July, 12 lbs. 8 ozs. 10 dwts.

ST. JOHN DEL REY MINES.—*Morro Velho, July* 28.—Gold extracted to date, 10,590 oits., from 494 85-100ths cubic feet of sand=21·4 oits. per cubic foot. Stamps working 28 days, average 68 heads.

Extension of Western Lode.—The work of exploration, on the western ground, has been fairly commenced. If as successful as I am led to anticipate, the results will prove highly beneficial to the company.

CALLINGTON MINES COMPANY.

At a quarterly general meeting of shareholders, held at the offices, Finsbury-square, on Wednesday, the 29th September.

RICHARD HODGSON, Esq., in the chair,

The circular convening the meeting having been read, the following report from the directors was submitted:—

REPORT.

The pleasure with which the directors meet their fellow-shareholders, for the purpose of announcing to them, from time to time, the progress and prospects of these mines, is, upon the present occasion, considerably increased by the favourable state of the mines, and by the knowledge that the report of the last general meeting is not only fully realised, but, in many material and propitious circumstances, much exceeded.

In the report of Capt. Phillips the operations are detailed fully, as regards the Kelly Bray part of the mine, towards which much expectation and interest has been manifested—and the result of the workings there remove all doubt of success, and render certain the anticipations, which were expressed by the directors at the last general meeting, of a richly productive and lasting lode at that part of the sett: these results have materially enhanced the value of your property, and justify the high appreciation in which the mine is held. A few months will afford a most convincing proof of the mines' prosperity, by the returns of copper from the Kelly Bray lode. Strenuous exertions are being made to expedite the consummation of this object; and, as there is every facility for rapidly opening this lode to a great depth, large and speedy returns may be anticipated.

These very satisfactory and encouraging circumstances are rendered still more important and favourable, by the productiveness of the great cross-course, which is found to produce silver-lead ores. From the eastern side of this, very large and rich stones of silver ores have been broken; and, when the convenient time arrives for working this part of the mine, profitable returns may be confidently expected. The north mine continues to present very favourable indications, and to yield very profitable returns; the operations during the last three months, and the present state, is fully described in the captain's report, from which it will be ascertained that this part of the mine has much improved since the last meeting. A dividend (being the sixth) of 1*l.* per share has been declared out of the balance shown by the accounts in favour of the company. The reserve fund has been increased to 510*l.* 19*s.* 6*d.*, which, with the copper ore in course of being returned, places the accounts in a very satisfactory state. In all respects, therefore, it may be confidently stated, that these mines since the last meeting have most materially improved in their prospects, and increased in value; and that they will, doubtless, realise the captain's opinion of occupying a conspicuous position amongst the leading mines in the county of Cornwall.

Callington Mines Company—Statement of Accounts, from March to June, 1847.

Dr.	EXPENDITURE.			
Amount of April cost			£1781	4 7
Ditto May ditto			1873	12 3
Ditto June ditto			1927	2 5
Disbursements—London management, 50*l.*; directors' attendances, 62*l.* 10*s.*; interest, 18*l.* 8*s.*; petty cash, 25*l.* 16*s.* 7*d.*			156	14 7
Fifth dividend, 1000*l.*; reserve fund, 100*l.*			1100	0 0
Balance			870	16 3
Total			£7709	10 1
Cr.	**RECEIPTS.**			
By silver-lead ore—April returns		£2083 9 7		
" —May ditto		1926 4 0		
" —June ditto		3083 13 8	6093	7 3
Kelly Bray—April cost, 112*l.* 7*s.* 6*d.*; May, 168*l.* 6*s.* 6*d.*; June, 193*l.* 6*s.* 2*d.*			474	0 2
Copper ore sold, 59*l.* 1*s.* 1*d.*; old materials, 20*l.* 5*s.* 6*d.*			79	6 7
Balance from last quarterly account			1062	16 1
Total			£7709	10 1

Balance, 870*l.* 16*s.* 3*d.*; copper ore, 100*l.*; reserve fund, 510*l.* 19*s.* 6*d.*
Due for rice, 14*l.* 17*s.* 9*d.*

The following report from the mining captain was then read:—

Callington Mines, September 25.—I beg to hand you the following report of these mines. Kelly Bray engine-shaft is rather more than 35 fathoms deep. From this point we are cross-cutting towards the lode; and from the underlie of the same, in the winze sinking below the 25, being only 1 foot in a fathom, we have 2 fathoms more to drive, in order to cut it in the winze, now 3 fathoms below the 25. The lode is 4 feet wide, composed principally of quarts and mundic, intermixed with native copper, and stones of yellow ores—improving as we sink. Could we put two pares of men to work here, we should be driving at the same time; but as this cannot be done, we consider it most advantageous to sink to open a communication, whilst we have no water to interrupt our progress. In the stopes in the 20, the lode is from 3 to 4 feet wide, intermixed throughout with copper ores. We have driven through the great cross-course in the 70 fathom level, and are now driving east on this lode, towards Kelly Bray; the distance from this point to the engine-shaft is 75 fathoms, and from the shaft to our eastern boundary, 400 fathoms. Immediately on cutting through the cross-course, a rich lode was met with: this has not proved to be a regular course of ores, the ground being intersected by numerous cross branches. Changes take place every day: the ground, so far as driven, has been orey all the way through, the lode averaging 4 feet wide. We purpose putting the men to rise here shortly, in order to open a communication with the shallower levels, for the purpose of ventilating the whole. The 50 is now within 7 fathoms of the great cross-course; and in the 40, which is beyond the same, we have discovered a branch, underlaying south. Not being satisfied that this is the whole of the lode, we are continuing the cross-cut south: in order to prove this part, we shall sink to communicate with the 50, either on the cross-course, or on the course of the lode, whichever may appear to be the most expeditious. The 90 fathom level, on this lode, is also being driven east—now about 40 fathoms to the west of the great cross-course—so that you can plainly see we have an opportunity of opening this lode to a great depth, in the course of a few months, and reasonably calculate on making large returns from the same, when this shall have been accomplished, and the different levels driven a proper distance to commence working the backs. One point in connection with this worthy of notice, is the productiveness of the great cross-course for silver-lead ores—a feature which has not been seen, to the same extent, in connection with any other intersection yet opened on in this locality. On the eastern side, more particularly, large rich stones of silver ores were broken. Some profitable returns we expect from here, when a fair opportunity shall present itself for working the same. At the North Mine, the 100 fathom level north is being driven through a productive channel of ground—now about 40 fathoms from our northern boundary. The lode continues to produce work of a moderate quality, and the backs will yield a fair profit to the shareholders. This part of the mine shows a more cheering aspect than either of the shallower levels in this direction. The south end has been driven to within 45 fathoms of the counthouse-shaft: the distance between the point of this and the 100 north, at the South Mine, is 160 fathoms—a very desirable object to be carried out with all expedition, as the water could then be pumped by either engine, as necessity might require. The ground here has been rather hard for the last few fathoms; at present it is softer, and the lode wears an improving appearance. We expect soon to cut the Kelly Bray lode here. The 90 north is just the same distance from shaft as the 100: the ground is of a favourable character; the lode is rather poor; the south end still continues to open tribute ground. The 70 north is being driven through ground that will work in a high tribute. The 40 north has been poor: several east and west lodes and branches have been met with here: on the last we have intersected, we are driving west, and have broken good stones of copper ores. At the South Mine, the 125 fathom level has been driven 15 fathoms; the ground is very hard. A winze from the 112 is holed to this part. The lode is 1 foot big, and the back will work for about 8*s.* in 1*l.* on the value of the lead. In the 112, both north and south, the lode is coarse in quality: the backs will work in high tributes. In the 100 and 90 fathom levels, both north and south, the lode continues to produce silver-lead ores, and tribute ground is being laid open. Our prospects have much brightened since our last meeting; and, although large returns cannot be calculated on for a few months, there appears not the shadow of a doubt, when our eastern ground has been fairly laid open, but that the shareholders will receive ample compensation for the outlay they have made, and these mines take a stand amongst the leading ones of the county.—J. T. PHILLIPS.

After the reading of the reports, the Chairman produced two splendid ingots of silver, the produce of some of the ore taken from the lode lately discovered, several beautiful specimens of which were exhibited on the table, and which seemed to give great satisfaction to the proprietors present, who also appeared highly pleased with the improved prospects of the mine; and, after some desultory conversation, the resolutions (for which see our advertising columns) were passed unanimously, when the meeting separated.

TINCROFT MINING COMPANY.

At a general meeting of shareholders, held at the offices, Finsbury-square, on Thursday, the 30th September,

RICHARD HODGSON, Esq., in the chair,

The CHAIRMAN explained that he had been unexpectedly called upon to preside, in consequence of the unavoidable absence of Mr. Grout, the chairman of the board of directors. He also stated, that he had only recently joined the direction, at the urgent request of the directors, who entertained the opinion that his experience in mining operations would be useful to the company. It was not without reluctance that he had consented to share the responsibility and labour of a director.

The advertisement convening the meeting having been read, the following report from the directors was submitted:—

REPORT.

The object of the present meeting is to lay before you the statement of accounts for the months of March, April, May, and June, and to present you with the agent's report of the operations during that period, and the present prospects of the mines. The steadiness of improvement, alluded to at the last annual general meeting of the shareholders, has continued up to the present time; and, during the four months, many important and favourable discoveries have been made, which have considerably enhanced the value of the property, and give promise of yielding rich and profitable returns to the adventurers. Captain Paul's report contains a very satisfactory account of the Palmer's part of the sett. The north part of East Pool lode has been cut through, and has been found to be 3 ft. wide, and very promising; indeed, all the levels at this part of the mine are producing good work, and presenting more favourable indications than for years past. It will also be observed, that the south mine has considerably improved in value—the lode in the winze sinking below the 20 fathom level being worth 15*l.* per fathom, and the lode in the 120 east being also rich. The state of Chappie's lode has tended much to increase the value of this property. A caunting lode in the 90 fathom level is worth 25*l.* per fathom for copper, and the lode at Wheal Providence, in the 20 fathom level east, fully realises the expectations which have been expressed of it: it may, therefore, be confidently said, that the mine is much increased in value, and improved in prospects, and that it is at the present time in a more propitious condition than for some time past. The accounts, duly audited, will now be read to you. A balance is shown in favour of the company, amounting to 1381*l.* The sampling of copper ore has considerably increased, and the sampling for August will exceed 600 tons; when, therefore, the returns are realised, the balance in favour of the company will be much augmented; and it is confidently anticipated, that the funds of the company will speedily place the shareholders in receipt of dividends. The directors have to announce to the proprietors, that they have, in accordance with the provision endorsed on the scrip shares, elected Mr. Richard Hodgson a director of this company.

Tincroft Mines Company—Statement of Accounts for Four Months, ending June, 1847.

Dr.—March cost	£2728	11	9	Cr.—February returns	£3072	6	7
April ditto	2719	15	8	March ditto	3046	12	7
May ditto	2693	4	10	April ditto	2740	2	5
June ditto	2658	18	6	May ditto	2608	10	2
Disbursements	183	9	10	June	2979	8	2
Ball. last annual gen. meet.	2081	7	2				
Balance	1381	2	2				
Total	£14,446	19	11	Total	£14,446	19	11

The following report, from the mine captain, was then read:—

Tincroft Mines, Sept. 25.—Presuming it will not be necessary for me to give you a detailed statement of ground driven, &c., for your general meeting, on the 30th inst., as for your last annual meeting, I will confine myself to a report of the present state and prospects of the mines. At the North Mine, the lode in the 100 end east is 4 ft. wide, orey throughout, worth 8*l.* per fm.; the lode in the west end, same level, is 20 in. wide, producing some good quality ore, worth 6*l.* per fm. The lode in the 90 east is producing saving work for ore, but not to value; the lode in the 90 west is 20 in. wide, producing coarse quality ore, worth 6*l.* per fm.; the lode in the winze, coming down on this level, is 20 in. wide, worth 12*l.* per fm. The lode in the 80 east is 2 ft. wide, saving work for tin, worth 6*l.* per fm.—we are looking out for an improvement in this end, as it is getting near being under good tin ground gone down in the bottom of the 70; the lode in the 80 west is split into two branches, each producing ore, worth now 3*l.* per fm.; we expect an improvement when the branches get together again, which very likely will be the case in 10 or 12 ft. The lode in the 70 east is large, and very hard, and producing but a small quantity of tin—we expect to get into a better channel of ground soon; the 70 west is suspended, being near the boundary. The 60 west is producing good work for tin, and some copper ore, worth 12*l.* per fm.—I can speak of no improvement in the tribute department in this part of the mine. At Palmer's shaft, in the 80 fm. level, we cut through the north part of East Pool lode, and are driving on it, which is 3 ft. wide, producing some ore, and kindly; driving east from this winze, to meet the 80 end, the lode is 3 ft. wide, producing good stones of ore; we have now 3 fms. to hole, which, when done, I purpose to sink the shaft below the 80. The lode in the 70 west is 3 ft. wide, worth 20*l.* per fm.; the stopes in the back of this level is worth 20*l.*; stoping by six men, at 4*l.* per fm. The lode in the 48 west is 20 in. wide, worth 8*l.* per fm., and very promising; we have driven through several fathoms of good ore ground in the 70, and are opening very promising tribute ground in the 48—I may venture to say that this part of the mine is looking better now than for years past. At Stainsby's shaft our prospects, I consider, are good, but we cannot sink the said shaft till we shall have holed the adit; we have 10 men engaged driving to meet each other, but the ground hitherto has been hard, although now in one end it is improved. At the south mines, the ground east and west of engine-shaft, below the 152, is let at an average tribute of 9*s.* from 20*s.*, and men getting fair wages. The lode in the 142 east, and the rise in the back of it, is large, producing fair quality tinstuff. The lode in the winze, sinking below the 120, is 4 ft. wide, worth 15*l.* per fm. The lode in the 120 east is 4 ft. wide, worth 20*l.* per fm.; the stopes, in the back of this level, is worth 15*l.* A winze, sinking below the 110, is worth 15*l.* per fm.; the stopes, in the back of 110, is worth 15*l.* per fm. The pitches continue to produce fair quality tinstuff, with the exception of one pitch in the back of the 110, which some time since produced 6 or 7 tons of black tin per month, but is now nearly exhausted, and we cannot follow the same bunch below the 110, on account of the water; but the 120, which is being driven by six men, towards (under) the same ground, will, I expect, unwater it in three or four months. Chapple's lode, in the back of the 100, and back of the 90, continues to look well. The 100 end east, on this lode, is producing some ore, and kindly; the 100 west is suspended, and the men put to drive west on a caunting lode in the 90 fm. level, recently discovered, and which is worth 25*l.* per fm. for copper ore. At Wheal Providence we have drained the water 6 ft. below the 12 fm. level, and have cleared the level 20 fms. east, so as to be able to examine the lode, which we have done, and, I am glad to say, it so far fully answers my expectations; some stones which I broke from the lode, below the bottom of the 12 fm. level, and in the back of the level, I have forwarded for your inspection. I regret to say, that we find the engine-shaft in such a bad state, that we can sink no further till we shall have taken out the old timber, cut ground, and fixed new in its place, which will occupy two or three weeks; we have nine men engaged about it, and are getting on as fast as possible—taking the mines on the whole, I am glad to say that our prospects are better than for years past.—W. PAUL.

The CHAIRMAN said, he had recently paid a visit to the mines, in company with Mr. Percival Johnson, and the result of the inspection would most likely be a change in the working to the extent of discontinuing operations as regarded the less productive portions, and prosecuting the productive parts with increased vigour.—In answer to a question, Mr. STAINSBY (one of the directors) stated, that the probability was, that the profit to arise from the operations for July and August would be about 1000*l.*

A SHAREHOLDER said, he should feel much obliged to the chairman, if he would give him his candid opinion of the prospects of the company. At all the previous meetings flattering hopes had been held out of speedy dividends, but they had not been realised, and now the shareholders seemed to be as far distant from their object as before.—The CHAIRMAN said, that as he had only paid one visit to the mines, and had not been underground, he was not in a position to hazard a specific reply to the question. He entertained good hopes that the result of the contemplated change of workings would be beneficial. The expense, too, would be lessened, as the fall in the price of provisions would lead to a reduction of wages.

Mr. LEE expressed the disappointment which he himself, with other proprietors with whom he had communicated, felt at the very favourable prospects, held out at previous meetings, not having been realised, which, indeed, led him to suppose there must be something wrong in the management; and, although he had the greatest confidence in the directors, he considered it would be more satisfactory to the shareholders that a deputation, consisting of three adventurers, accompanied by some well-known mining captain, should inspect the mine and accounts, and report thereon, and moved a resolution to that effect; but, after an able explanation from the CHAIRMAN, who expressed his intention of shortly revisiting the mine, with Mr. P. Johnson, in order to carry out the alteration in the workings contemplated, and the sense of the proprietors present being decidedly in favour of waiting until the next meeting, when the result of the workings for the months of July, August, and September, would be seen, before adopting any specific course, Mr. LEE begged to withdraw his motion.

The CHAIRMAN stated, that a meeting would be called about Christmas, or soon after, when the accounts would be submitted.

The report and accounts were then adopted; and, after a vote of thanks to the chairman and directors, the meeting separated.

The resolutions passed will be found in our advertising columns.

GWINEAR CONSOLS MINING COMPANY.

A meeting of shareholders was held at the offices, Three Kings'-court, on Wednesday, the 29th Sept.—The following statement of accounts was produced:—To cost for June, 88*l.* 5*s.* 6*d.*; ditto July, 130*l.* 5*s.* 6*d.*; ditto August, 120*l.*; timber bill (omitted in April), 8*l.* 9*s.* 4*d.*; steam-engine, &c., 400*l.*; merchants' bills, 235*l.* 5*s.* 4*d.*—982*l.* 5*s.* 9*d.*—By ores sold, July 23d, and Aug. 12th (less dues) 244*l.* 18*s.* 10*d.*; by balance in hand to end of May, 110*l.* 17*s.* 5*d.*—355*l.* 16*s.* 3*d.*: leaving balance against the mine of 626*l.* 9*s.* 6*d.*—The accounts having been examined, were allowed, and a call of 2*l.* per share made, to pay for the engine, included in the balance; the engine goes to work in about one month from this date.

WEST WHEAL PROVIDENCE MINING COMPANY.

At a meeting of adventurers, held at the offices, Three Kings'-court, Lombard-street, on Wednesday, the 29th September, the accounts were presented, showing—Cost from January to July, inclusive, 667*l.* 7*s.* 11*d.*; merchants' bills, 75*l.* 8*s.* 7*d.*—742*l.* 16*s.* 6*d.*—By tin, copper, and arsenic (less dues), 106*l.* 1*s.* 6*d.*; balance from last account, 2*l.* 7*s.* 1*d.*: showing a balance in favour of the mine of 327*l.* 12*s.* 1*d.*—The accounts having been examined, and passed, a dividend of 25*s.* per share was declared out of the balance of profit. It was resolved that a report of the workings, and a copy of the accounts, be transmitted monthly to the secretary, for the inspection of the adventurers in London. The following report was presented:—"Since the last meeting, held in March, we have sunk on Wheal Providence lode to the 40 fm. level, and extended west from the boundary, 21 fms. in good tin ground, averaging 1 ft. wide, that will be wrought at 4*s.* 6*d.* in 1*l.*; and no part of the back is yet stoped away. We expect to intersect a north branch, 5 fms. west of the present end, that will materially improve the quality of the lode, judging from its influence in the level above; price for driving, 24*s.* per fm.; value, 12*l.* per fm. Michell's shaft is communicated to the 40 fm. level, and this level is extended west of said shaft, on the branches that run parallel with Providence lode, for 5 fms., which are all productive, and will work at a moderate tribute; present price for driving, 40*s.* per fm. We have 8 men on tutwork, whose returns pay their expenses—a circumstance rarely occurring in mining; and on tribute, 10 men, in the 35 fm. level, at an average tribute of 12*s.* in 1*l.*; and 2 men, in the 20 fm. level, at the same tribute. The ground laid open in the 40 fm. level would admit of 8 pitches, of 4 men each, at a tribute of 4*s.* 6*d.* in the 1*l.*, being immediately set, had not the scarcity of water, and want of stamping power, in the neighbourhood, been inadequate to returning the produce such additional force would produce. The agents deeply regret, with such prospects in possession, the total absence of any local stamps they might rent; but, should one offer, no effort on their part shall be wanting to secure it. The adventurers are already made acquainted with the arrangements entered into betwixt us and the Tremayne adventurers, to unwater our mine to the 60 fm. level, and cannot be ignorant of the advantages that will arise from its completion. The delay is owing to the strata changing in its character from 1*l.* to 7*l.* per fm. for driving. Another circumstance, much to be regretted, is their inability to give, on the present occasion, that balance of profit which circumstances, at our last meeting, justified the agents in anticipating.

PLYMOUTH WHEAL YEOLAND.—A meeting of adventurers was held, on the 23d ult., at which a statement of accounts was presented, showing—Balance due the mine, June 30, 102*l.* 2*s.* 2*d.*; call of 1*l.* per share, made July 22, 494*l.*—596*l.* 2*s.* 2*d.*—By July cost, 99*l.* 5*s.* 10*d.*; August, 83*l.* 18*s.* 3*d.*—leaving balance of 412*l.* 18*s.* 1*d.*; of which 270*l.* are calls in arrear. The following report for the past two months was presented to the meeting:—"The north adit has been driven east on the north tin lode about 11 fms.; within the last 3 fms. the lode has much improved—it is now about 3 ft. wide, all saving work, and promising further improvement—I think it worth from 5*l.* to 6*l.* per fm.; the south adit has been driven east on the south copper lode about 10 fms.—it has produced some good stones of copper ore, but the lode is small; a rise is being put up at the end of this level—it is now about 3 fms. above the back of the adit; and when communicated with the surface, will be made use of as a shaft for pumping, dressing, water and ventilating, and clearing the stuff from the adit, which will be again commenced towards the south tin lode—this rise will be holed in about a fortnight. The engine-shaft, on the south tin lode, has been sunk between 5 and 6 fms.—it is now about 11 fms. deep; the lode has varied from 2 to upwards of 5 ft. in width, and, I believe, has produced on an average, 1½ ton of tin per fm.—the last fathom has produced more than double this quantity. A new 30-inch cylinder double acting steam-engine has been ordered from Mr. Mare, for pumping and stamping; he has contracted to get it on the mine by the 1st December, 1847—but from the forward state of the castings, I hope we shall have it before that time. The foundation of the engine-house is being cleared out, and the building let to be completed, on or before the 30th October—we have also a smith's and carpenter's shop in course of erection. The water stamps have not been working for the last two months, in consequence of the smallness of the stream, and not being able to pool it whilst the south adit was driving to the present point; but as soon as the rise, before alluded to, in the back of the adit, is communicated to the surface, we shall be able to put it to work, and, I hope, return tin before the next meeting, perhaps to the amount of 200*l.*"

ACCIDENTS.

Wheal Reeth.—As G. Rundle was working in the 40 fm. level, standing in one of the shafts, engaged in driving a nail into a piece of wood, some hard substance fell through the shaft, and struck him on the head. The blow knocked him senseless at first, but only for a short time, when he again became quite collected. He lived to be taken to the surface, where his wounds were dressed by the mine surgeon, and from thence to his home at Ludgvan, where he died on the same day.

East Wheal Rose.—W. Grose, a kibble filler, and a companion, named Perry, were sending up stuff from the 100 fm. level through Michell's engine-shaft, and, while so working, one of the kibbles set, or hung, in the shaft; and Perry went up and cleared it. On coming down again, he found that the kibble chain had broken, and his comrade (Grose) was lying quite dead, with his head in the side level, and his legs towards the plat.

Houston Colliery, Cockpen.—While John Tweeddale, collier, was working here, a heavy stone fell from the roof on his head, and caused instantaneous death.

Hamer Bottoms, near Rochdale.—As J. Chadwick, and a companion, named Urmson, were engaged sinking a new pit at Syke Colliery, and when preparing to blast, the powder ignited, and Chadwick received such injuries as shortly to occasion his death—Urmson, also, was seriously injured.

Dudley Port.—J. Mercy, J. Jones, and W. Cotton, were seriously injured by a fall of stone in a limestone pit, belonging to Mr. Frederick Giles—Mercy has since died of the injuries he received.

Wolverhampton.—At the Whimsey Lane Head, Frances Broomhall, a bankswoman, about 18 years of age, while stepping from the plate of a stone pit, at which she was banking on to its side, for the purpose of pushing the waggon over the pit, fell down the shaft, and died in about 20 minutes afterwards.

Rowley Regis.—W. Mow and G. Carter, employed at Mr. Batson's Colliery, at Tividale, went on Sunday to descend the pit to feed the horses; but, before they went down, the boiler exploded, and injured them so severely, that one died in about three hours, and the other the next day.

Accident at Hindley-green Colliery, Wigan—Caution to Sinkers.—On Tuesday, an accident of a serious nature, and an almost miraculous escape from instant death, occured to a sinker, named Ralph Moseley, engaged at a new shaft at Mr. Scowcroft's colliery, Hindley-green, near Wigan. Mossley had laid a charge of powder in the rock, for the purpose of having "a shot"—a term applied to the blasting or blowing up of the rock—and was busily engaged in ramming pieces of metal, and other materials, into the hole with an iron bar, that the blow-up might have more force. The bar coming in contact with the metal, or rock, and with the strong force used in ramming the charge tightly in the hole, is supposed to have struck fire, and ignited the powder. The consequence was a fearful explosion, from which Moseley was very seriously hurt—his hands and face being much disfigured. He, however, was not considered dangerously injured, and strong hopes were entertained of a speedy recovery.—*Liverpool Mercury.*

Fatal Colliery Accident at Worsbro'.—On Saturday last, at the house of Mrs. Ann Fisher, the Gate Inn, Pilley, an inquest was held before Thomas Badger, Esq., the coroner, on view of the body of Joseph Beaumont, aged 55 years, steward of Messrs. Fields, Cooper, and Co.'s coal and ironstone mines, at Worsbro'-bridge. It appeared, that on Thursday, the deceased was inspecting the works at one of the pits, near Pilley-lane end, when he was induced, from the state of one of the workings, to draw the attention of his nephew (John Swift), underground steward, to the place. He was standing with Swift upon a stage at the entrance to the workings, and about eight yards from the bottom of the pit, in the act of pointing out some precautionary steps which ought to be taken to prevent any accident, when a quantity of foul air from the workings below was driven by a gust of wind towards the stage, and, coming in contact with a naked candle, which Swift held in his hand, the gaseous air ignited, and a most fearful explosion followed. Beaumont and Swift were, with the wooden stage on which they were standing, blown some yards up the shaft, and then dropped to the bottom of the pit. The timbers of the stage fell with a fright-

ul crash, covering the heads of Beaumont and Swift. Mr. Beaumont's head was so severely cut and crushed, that he must have died immediately. Swift received such injuries, that his life is despaired of. The explosion was of so fearful a character, that the landing boards, &c., at the pit mouth, a distance of upwards of 100 yards, were blown up. On the men reaching the bottom of the pit, they found Mr. Beaumont covered with pieces of timber and quite dead. Swift was also found in a state of insensibility. They were both immediately removed out of the pit, and carried to Mrs. Fisher's, the Gate Inn, where surgical aid was promptly obtained. The jury returned a verdict of "accidental death."—*Sheffield Times.*

There are very high quarries of limestone belonging to the Cyfarthfa Iron-Works, at a place called Gyrnor, at which many workmen are constantly employed. On Monday last, one of the workmen lost his footing, and fell from a great height to the ground; when picked up, it was fully expected that he had been killed, but, fortunately, though considerably hurt, it is thought he will very soon recover.—*Monmouthshire Merlin.*

Death from Youthful Bravado.—Thomas Russell, aged 15, whilst standing near to the shaft of the Elemore George Pit, of Hetton Colliery, remarked to a person, who was standing near him, that he would leap upon the rope: he immediately did so, and, hanging by the rope, which is used for drawing the coals up the shaft, his weight caused the engine to move, and he was lowered down the shaft about a fathom; whereupon he called to the brakesman to stop the engine, but, before the latter could accomplish this, it had reversed, and the deceased was drawn up the pulleys, over which the rope works, and was thrown off. He fell upon the settle boards, at the top of the shaft, and was precipitated thence to the bottom—a depth of about 38 fathoms. He was quite dead, when taken up.

A young lad, named T. Edwards, about 15 years old, was killed on Monday last, at one of the Rhydycar Pits, by some coal and rubbish falling on him.

Engineman killed by Machinery.—T. Clanghan, engineman, aged 64 years, whilst attending to the engine at Kelloe Pit, by some means unknown, had his head severely crushed between the engine-beam and the arch of the engine-house; he was quite dead when found. It is supposed, he had been looking along the beam, to see if the engine was working in a proper manner, and had been so struck by it.

Merthyr—Cwmcannad Pits.—A boy named John Edwards, was killed by a fall of coal from the top of the level.

GREAT WHEAL MARTHA MINING COMPANY.

[FROM A CORRESPONDENT.]

On handing you the following letter, I have merely to observe, that the writer is an experienced and practical mining agent, who has had considerable experience in most of the mines in the eastern district. His observations are to the point, and confirmed by the reports of Capts. James Seccombe, J. Paull, and J. T. Phillips, who have been employed officially by the directors to inspect the mines, and report their opinions. These gentlemen, ever anxious to promote the interests of the company, by adopting the recommendations of experience and talent, have resolved upon sinking their engine-shaft to the depth of 80 fms. before seeing the lode at any intermediate level, and it is ardently hoped, that their enterprise and perseverance will meet the reward they so fully merit:—

"Sir,—Being known to you for many years, during which time I have given you my candid opinion of different mines in the eastern district of Cornwall, as well as in the western district of Devon, I think by this time you are able to judge whether my statements are in general right or wrong. I wish particularly to call your attention to the Great Wheal Martha Mine, on which you know there have been a great many reports lately, which I believe to be honest and straightforward, and to the best of the judgment of the writers. But I cannot help telling you that, until the last month or two, the present company have not ceased from what I call annihilating mining in this most favourable district—[illegible] using their money in driving worthless and shallow levels, where every practical mining miner must conscientiously say, that they never could have had the s[illegible] making a farthing return for the great outlay. I have written you to th[illegible] past, and have repeatedly stated that they might as well have thrown their [illegible] the great deep, as use it in the manner they were doing. Of course, it may be [illegible] that it was their own money that they have spent, and that they had a right to use it in what way they thought proper, and that my views of mining could never exceed their own agents. If the shareholders agree with the directors, nothing certainly can be said as to their perfect right to have employed the money as they liked; but the real question is, Has every man, who professes himself to be a miner, the practical knowledge of it? I doubt it; and if they have not, they look into mining with different eyes, form erroneous ideas, and, by using a theoretical language, entirely mislead the practical operator. Gentlemen, who are inclined to speculate, are led to believe in their statements, and, consequently, the practical knowledge of mining is kept behind the scenes, and only used occasionally. A misspent capital does great injury to the mining interest, in whatever district it is unfortunately employed; and I, as a miner, have undoubted right to protect my own interest, as well as the interest of thousands of my fellow-men, who are entirely dependent on the progress of mining for support. Now, Sir, you will bear in mind, that I am not condemning the Great Wheal Martha Mine; but quite the contrary—I believe it will make a good mine, and would long ago have been so, if they had gone the right way to work—that is, if they had spent their money in sinking through the strata which they are now in, instead of driving those shallow and worthless levels: if they had done this, they would have had in hand some thousands of their money they have already spent, and, I have no doubt, they would by this time have had a paying mine.—*Callington, Sept. 23.*"

MINING NOTABILIA.

[EXTRACTS FROM OUR CORRESPONDENCE.]

Herodsfoot ore realised 678*l.* 12s., being 60 tons (at least 2*l.* per ton under its value for lead only). The mine continues just as last reported, with constant variation, of course, from the nature of the lode. When we get more rain, we shall be able to work our mine fully, owing to the drawing machine, and, consequently, greatly increase our produce.

Herodscombe ore made 397*l.* 10s. (rather more than we expected). We are doing little here, except cross-cutting at 12 fathoms below the adit; it will take nearly a month to reach the lode.

Wheal Curtis.—We dropped on Friday 5 fms. 3 ft., which we expect will reach the 30 fm. level; and on Wednesday night, or Thursday morning, to fork the water as far as we have dropped. We hope to be able to get into the 20 fm. level to-morrow, and to break some copper ore from this end; there is a large lode in back of this level, composed of spar, mundic, black jack, and yellow copper ore; the air is bad, but we shall be able to ventilate it in a day or two. The mine is now in fork 23 fms. below adit.

Wheal Tremayne.—In the 10 fm. level, driving east of Wheal Margaret shaft, on the south lode, the lode is 2 ft. wide, worth 20*l.* per fm. for copper ore in the bottom of the level, and for 2 ft. up in the end; the top part of the level is not so good, so it appears the ore dips west; in driving east, it comes in the bottom of the level first. This is a very promising part of the mine—a long piece of ground unexplored.

We are informed, that an improvement has taken place in South Maria, and that the shares have changed hands at improved prices.

St. John del Rey Mining Company.—On the 6th June last, the miners and mechanics, in the employ of the St. John del Rey Mining Company, presented to Charles Herring, Esq., late superintendent of that establishment, at Morro Velho, and also to R. J. Duval, Esq., first officer, each a handsome gold snuff-box, as a testimonial of their esteem and regard.

Bold Adventure.—A meeting of adventurers was held at Truro, on the 23d ult., when the accounts from February to August, inclusive, as follows, were passed, and a call of 1*l.* 10s per share ordered:—To balance at last account, 60*l.* 6s. 4d.; costs and merchants' bills, 264*l.* 5s. 5d.=324*l.* 11s. 9d.—Received for arrears on former calls, 14*l.* 10s.; received on last call, 185*l.*; arrears on ditto, supposed to be good, 54*l.*=253*l.* 10s.; leaving a balance against the mine of 71*l.* 1s. 9d.

Callestock.—The meeting of adventurers took place on the 28th ult., when the following accounts were allowed:—By call 11th May last, of 2*l.* per share, 256*l.*; ores sold (less dues, 51*l.* 7s. 7d.), 1460*l.* 6s. 7d.=1716*l.* 6s. 7d.—To balance from last account, 235*l.* 17s. 2d.; costs, &c., for May, June, July, and August, 868*l.* 9s. 7d.=1104*l.* 6s. 9d.: balance in purser's hands, 611*l.* 19s. 10d.

Tresavean.—Statement of accounts to 28th September:—To amount of cost for July and August, 3092*l.* 6s. 1d.—By copper and tin ores, sold June and July (less lord's dues, 153*l.* 12s. 4d.), 2916*l.* 18s. 3d.; sundry credit, 188*l.* 9s. 6d.=3105*l.* 7s. 9d.: leaving balance, 13*l.* 1s. 8d.; in hand, end of June, 1141*l.* 6s. 6d.=1154*l.* 8s. 2d.

Trethellan.—Statement of accounts to 28th September:—To labour costs for July and Aug., 285*l.* 18s. 1d.; merchants' bills, 141*l.* 16s. 4d.=427*l.* 14s. 5d.—By copper ores, sold 29th July (less lord's dues, 41*l.* 9s. 3d.), 580*l.* 10s. 2d.: balance, 152*l.* 15s. 9d.; in hand last account, 332*l.* 3s. 6d.=484*l.* 19s. 3d.

Perran Wheal Virgin.—A meeting of adventurers was held on the mine on the 21st ult., when the following accounts were passed, and a call of 8*l.* per share ordered:—To balance from last account, 244*l.* 5s. 8d.; costs and merchants' bills for May, June, July, and August, 783*l.* 10s.=1027*l.* 15s. 3d.—By ores sold, 700*l.* 18s. 7d.: leaving balance against the adventurers of 326*l.* 16s. 8d.

Wheal Williams.—At a meeting of adventurers, held at Farquharson's Hotel, Truro, on Wednesday last, the following statement of accounts from April to August was allowed, and a call of 4*l.* per share ordered:—Balance at last account, 333*l.* 1s. 6d.; cost & merchants' bills, 1588*l.* 10s. 5d.=1921*l.* 11s. 11d.—By call (less arrears 249*l.* 5s. 4d.), 774*l.* 14. 8d.: leaving balance against the adventurers, 1146*l.* 17s. 3d.

Wheal Henry.—We are happy to say, that a lode has been recently cut in this mine, which bids fair to be a rich one. One of the captains at the Consols Mines inspected her, and gave a very favourable report.—*Penzance Journal.*

Great Northern Railway.—The board of directors, it is reported, intend to renew their application to Parliament, in the ensuing session, for the promotion of the Isle of Axholme Extension Line, embracing Wakefield and Leeds, in connection with the Great Northern.

NEW GALVANOMETER—VOLTAIC CURRENTS.

At the quarterly meeting of the West Riding Geological and Polytechnic Society, Mr. William Sykes Ward read a paper, "On a new Galvanometer, and on some of the Phenomena of Voltaic Currents,"—the paper was illustrated by many interesting experiments. To the cause which led to the invention of Mr. Ward's galvanometer, and its construction and utility, he thus alluded:—"Being engaged in a series of experiments, relative to the conduction of voltaic electricity, and requiring a galvanometer, in addition to the instruments I possessed, and not being able to obtain any instruments suitable for my purpose from the makers of philosophical apparatus in the country, I was led to make the galvanometer before us. The construction being new to me, and, as I conceive, combining simplicity of construction with several other advantages, I shall have much pleasure if it be found useful to those engaged in electrical investigations. My instrument consists of about 30 feet of copper wire, wrapped with cotton, coiled upon itself, and cemented with shell lac at the end and side—so as to retain its form, having the ends of the wire bent, so as to form points at which the coil is suspended in a vertical position. The points of the wire dip into two small cups, drilled into the end of two thick brass wires, which serve as supports for the coil, a little mercury being put into the cups. Two arms of wire are attached to the coil, on the ends of which a small scale, to contain weights, is suspended—thus forming a kind of balance, which, when nicely adjusted, is sensible to about the tenth part of a grain. A common permanent horse-shoe magnet is placed within the coil. Connections are made between the electrodes and the supports of the coil, by binding screws, or otherwise, as most convenient. Various coils of wire may be used, according to the quantity of the currents to be measured. With a coil of very fine wire, the instrument is moderately sensible, and is applicable when the currents are too powerful to be estimated by the torsion galvanometer. I believe the instrument possesses the following advantages:—That the indications are by weight, being a direct ration to the forces of the currents. That various coils, of known lengths and thicknesses, of wire can be used, and can be readily changed. That, by using short and thick wires, it may be employed for very powerful currents, with little danger of disturbing the polarity of the magnet. That, the magnet being fixed, the indications are not disturbed by the attraction of iron apparatus, or of the conducting wires. That the apparatus is easily constructed, and does not require delicate workmanship. It will also be readily seen, that the apparatus may be employed for ascertaining the relative strength of horse-shoe magnets.

At the conclusion of the paper, a brief but interesting discussion took place, arising out of some suggestions by Mr. Morton. The first of these suggestions was very important in its bearing upon the preservation of human life—namely, whether it was not desirable that men conversant with the science of galvanism (instancing Mr. Ward in particular) should direct their attention to experiments to ascertain, whether it would be possible to produce light without flame, for use in coal mines. Another suggestion had for its object, the consideration of the propriety of experiments directed especially to ascertain whether it would be practicable and economical to apply galvanism to motive forces, and the raising of weights.

The Earl of Fitzwilliam (the chairman) remarked, that the importance of the former suggestion had been painfully impressed upon the people of this part of England, within the last few months.

Mr. Ward said, his attention had been already, in some measure, directed to the application of magnetism to the purposes in question; and if it would be of any advantage to the society, he should be glad to pursue his investigations further. The results of his experiments hitherto, led him to fear that, even if the instruments were perfect, voltaic currents would be an expensive means of obtaining mechanical power. With regard to lighting coal mines by light without flame, he stated that a patent had some time since been taken out with that view; but he expressed his opinion, that galvanism would be an inconvenient means of effecting that object, it being necessarily attended with a cumbersome apparatus. With regard to the application of galvanism to the electric telegraph (which formed the subject of another suggestion from Mr. Morton), Mr. Ward said, that he should be glad, on a future occasion, to bring forward some of his own experiments, which he could not do until he had specified a patent.

Railway Calls.—In compliance with a requisition to the Mayor, signed by 290 persons and firms, a meeting was held in the Town-hall, Manchester, on Thursday last, "to consider whether any and what steps can be taken in order to limit the drain occasioned by railway calls upon the floating capital of the nation, and to diminish the pressure which is now so injuriously affecting the trade of the district." The meeting was very numerously attended, there being present several large shareholders and merchants of high standing in the town—E. Armitage, Esq., (the mayor), presided—and the first resolution was proposed by Mr. Bazley, president of the Manchester Chamber of Commerce; it was—"That, owing to the failure of the potato crop, and the general deficiency of our harvest in 1846, causing an extensive drain upon our resources for the purchase of food from other countries, our available capital is insufficient to carry on the necessary business of the country, and meet the demands now being made upon it for railway purpose.—Mr. Alderman Kershaw, the candidate for Parliamentary honours at the Stockport election, seconded the resolution, and it was carried *nem. dis.*—Mr. T. Greig moved the next resolution, as follows:—"That, in the opinion of this meeting, an attempt under present circumstances to carry out the large number of railway projects sanctioned by the Legislature, would be to increase to a serious extent the existing derangement of our monetary affairs—to aggravate an evil which is paralysing the commerce of the country, and depressing to an alarming degree the value of every description of investment, whilst it is to be apprehended that from the inability of shareholders in general to pay the calls which will have to be made upon them for the construction of the proposed new railways, such works will have to be suspended, if not entirely abandoned, and the money of the shareholders sacrificed." He considered it advisable that lines which could be soon finished, and which would bring into productive use a great extent of railway property, at the present time profitless, should go on; but, that lines not commenced, or which had only been proceeded with to a slight extent, should stand over for a time.—Mr. Medcalf seconded the resolution, and it was agreed to unanimously.—Mr. David Price moved the following:—"That, in the opinion of this meeting, the interests of the country at large, and more especially the railway interest, require the postponement of new undertakings, and this meeting strongly recommends all railway companies to defer commencing new works until the lines now in course of construction are completed, and to apply to the Legislature for an extension of the time allowed for the construction of the lines thus proposed to be postponed."—This resolution, having been seconded by Mr. W. Rawson, a railway director, and supported by J. B. Smith, M.P., was also unanimously agreed to. After voting thanks to the mayor for his presidency, the meeting separated.

The South Devon Railway—Atmospheric Traction.—We (*Plymouth Herald*) have pleasure in stating that the atmosheric mode of traction, which has now been in constant operation for several weeks, works most satisfactorily. In addition to the four extra trains, on Monday, three of the regular passenger trains commenced running atmospherically—8.20 A.M., and 12.30 P.M. up, and 9.50 A.M. down, between Teignmouth and Exeter—no delay whatever is experienced by the change of the propelling power. The piston carriage on the down trains runs on to Newton, where it is taken off with the superfluous carriages and placed on a convenient line, to be attached to the up-train when required—so that, on arriving at Teignmouth, the locomotive is removed, leaving the piston carriage to start the train when the signal is given; and on the down atmospheric train arriving at Teignmouth, the engine which has to run in front is instantly attached to the piston carriage, and is ready for the start, at all times, before the guard is ready, or the passengers are arranged. The 8.20 A.M. train, on Monday, started from Newton with the piston, carriage, three second-class, two first, horse-box, and carriage-truck—all laden. On arriving at Teignmouth, the locomotive bade adieu to its burthen; and when the signal was given, the apparently powerless train moved off—to use our correspondent's words—"with an agility, as if some superhuman power were concerned in the operation, the long train proceeding on with grace and ease, without any visible cause of propulsion." The different stations were called at as usual, and the train arrived in Exeter at its proper time. This train is generally heavy, and the taking it on by the new system is a proof of confidence in its operation. The Bath mail up, is taken on by the 12.30 P.M., by atmospheric, from Teignmouth to Exeter. Every train during the past week has worked with the utmost regularity, and the doubts of those who remained unconvinced of the practicability of the system appear now to be entirely dissipated. It is expected that the line to Newton will be opened atmospherically in the course of a fortnight, the apparatus being in a forward state, when it is generally understood that all locomotive power will be dispensed with above Newton.

Increase of Railway Traffic.—We learn from the Great Western traffic returns, that during the last 13 weeks the receipts have, without the opening of a single additional mile of railway by the company during the last 12 months, exceeded those for the corresponding 13 weeks of last year by no less a sum than 11,500*l.*, or nearly 1000*l.* per week. A remarkable fact connected with this increase of receipt is, that notwithstanding the depressed condition of the mercantile world, the Great Western Company have, during the last two weeks, carried more goods of a general description than they had ever previously conveyed in the same period—the goods' receipts for the last week amounted to 5280*l.* If this increase of receipts over those for the corresponding period of last year be maintained, and the continuous character of it promises well for its permanence, the company, which, it will be recollected, carried a disposable balance of 25,000*l.* and upwards to the revenue account last half-year, will be able to pay their usual dividend of eight per cent. per annum for the six months, without falling back on the resources made available both by themselves and the London and North-Western Company last half-year.

Proceedings of Public Companies.

MEETINGS DURING THE ENSUING WEEK.

Monday.....Patent Galvanised Iron Company—London Tavern, at One.
Tuesday.....Wheal Concord Mining Company—offices, at Two.
Newry and Kanaikilien Railway—offices, at Two.
Wednesday...Treleigh Consols Mining Company—offices, at One.
Great Wheal Martha Mining Company—offices, at One.
Llynvi Iron Company—offices, at One.
South Metropolitan Gas-Light and Coke Co.—London Tavern, at Two.
London Gas-Light Company—offices, at Twelve.
Thursday.....Wheal Sophia Mining Co.—Bennetts' Arms Inn, Lawhitton, Cornwall.
East London Water-Works—offices, at Twelve.
Friday.....Grand Junction Canal Company—Crown and Anchor Tavern, Twelve.
Alfred Life Assurance Company—offices, at One.

[*The meetings of Mining Companies are inserted among the Mining Intelligence.*]

NEWPORT, ABERGAVENNY, AND HEREFORD RAILWAY.

The half-yearly meeting of this company was held on Monday, at the offices, Moorgate-street.

The Hon. Capt. Fitzmaurice, in the chair.

The Secretary read the report, which stated that the company had obtained two Acts in the session, one for the purpose of reducing the works, by which a considerable reduction in the cost of making the line will be effected, to enlarge the station ground at Hereford, and to effect a thorough communication with the Shrewsbury and Hereford Railway, to Liverpool and Birkenhead. The other was a bill for extending the line from Pontypool to the Taff Vale Railway, and thereby intersecting the important mineral valleys in Monmouthshire, bringing the great iron and coal works into connection with the main trunk line by the conversion of the Monmouthshire Canal, the Rhymney, and other tram-roads, into locomotive railways of the 4 ft. 8½ in. gauge. By the advice of the engineer, the directors entered into conditional agreements for the purchase of the Rhymney Railway, and for the lease of certain tram-roads, the property of Sir Benjamin Hall, which adjoin the extension line to the Taff Vale Railway. The directors believed that applications will be renewed in the ensuing session for powers to connect the main line with the Birmingham and Gloucester Railway at Worcester, and that the contract had been let within the original estimate for the construction of that portion of the line between Pontypool and Abergavenny. To provide funds for the works, purchase of land, and to make further payments on account of the Hereford, Llanvihangle, and the Grossmont tram-roads, the directors have made a call of 2*l.* per share, 1*l.* payable on the 22d of September, and 1*l.* on the 23rd of November next. The late resolutions of Parliament have prevented the directors from paying interest out of capital, but when the final arrangements for the purchase of the tramroads are completed, they hope to be enabled to declare a dividend out of the income derived from that source. The balance-sheet to the 31st of August showed that 57,655*l.* had been received, and 50,115*l.* expended, including 19,037*l.*, the cost of their first act, leaving a balance of 7540*l.* in hand. In answer to questions, it was stated that 34,599*l.* had been received as deposits on shares; 22,265*l.* on the first call, and 7480*l.* on the second call.—The report was adopted.

The Chairman then moved that the agreement entered into for the purchase of the Rhymeny Railway be confirmed. He stated that the purchase money was 120,000*l.*; that it would at present pay them 4½ per cent. on the 22 miles; that it was a single line, and extended to Newport; that 10,000*l.* was deposited, and that they were to have seven years to complete the purchase. It was intended to make it a double line, the estimate for which amounted to 110,000*l.*, which it would cost them in addition to the purchase money. After some discussion the motion was agreed to.—The chairman moved the next resolution, to authorise the agreement entered into with Sir Benjamin Hall for the lease of his tram-roads at 3000*l.* per annum. It was stated that the average receipts on them for the last five years and a half amounted to 2814*l.* a-year above that sum; that they would be important feeders to the main line, and that the aggregate length was about 15 miles; that they were deeply indebted to Sir B. Hall for the great service he had rendered the company; that the lease was for 21 years, but that it could be made perpetual. The resolution was then agreed to, as was also one requestin gthe directors to press for the arrears on all calls now due. Thanks were voted to the chairman, and the meeting separated.

Caledonian Railway.—The works in the vicinity of Edinburgh are in a forward state, and will soon be completed. The terminus has been commenced, and, judging from the plans, will be an elegant structure. The chief engineering difficulty in this quarter has been the formation of an archway under part of the houses in Gardener's-crescent. In consequence of the railway passing but a few feet below the foundation of the buildings, the arch is being spanned by large iron girders of great strength. At Slateford, where the first station will be erected, there are two works of some magnitude—the viaduct across the water of Leith, comprising 14 arches, of 30 ft. span each, and an iron bridge way over the Union Canal of 63 ft. span—strength and solidity, rather than elegance, are their characteristics. Linhouse viaduct, 12½ miles from Edinburgh, is also a work of great magnitude. The line in this vicinity is in a forward state. At Carnwath, considerable difficulty has been experienced in carrying it across an extensive moss in that locality; but every impediment has been overcome. The extent of the main line unfinished is about 32½ miles. It is expected, however, that the entire line will be opened for public traffic about the beginning of December next. The directors have offered handsome premiums to those contractors who shall have their different sections finished before that time.

South-Western Railway—Extension to Hungerford-Bridge.—This stupendous undertaking is rapidly progressing towards completion—the great arch that is to cross the Westminster-road has been commenced, the stone plinths are being laid, and the abutments already appear above the foundation; when completed, it will present to the eye a span of 90 ft., and an elevation of 17 ft. The arch crossing the Wandsworth-road is completed, and is 70 ft. span. The arch at South Lambeth-road is a great curiosity; though it is 16 ft. span on the square, and 38 ft. square, and built over a sewer, it is constructed entirely of brick; from the peculiarity of the foundation, it presented some difficulties to construct safely, but they have been overcome by the able engineer for the company, Mr. Locke, and the arch is now complete. The arch over Paradise-street is to be a flat arch, and to consist of 10 iron girders of enormous size, being nearly 30 ft. long, and of 3½ tons weight each. These beams were lifted to their places on Friday last, in the presence of a croud of persons, and under the superintendence of Mr. Tolmie. While the beams were being raised, some of the spectators appeared to apprehend that the great strain on the chain would break it, but the whole mass was placed in its proper position without the slightest accident having occurred.

South Eastern Railway.—The operations of this company, for the commencement of their North Kent line through Woolwich, have been suspended during the past week or two—the company having openly avowed their resolution to abandon the contemplated line, for which an Act was obtained last session, and to apply to Parliament in the ensuing session for an amended bill, with powers to tunnel under the whole of the town. Borings have already been made, with the view of ascertaining the nature of the substrata. It is understood that the motives which have induced the directors to decide on this step—or, at least, to hold it out by way of threat—arise from the enormous sums demanded by way of compensation by the owners of property lying in the track of the proposed line.

West Flanders Railway.—The traffic of the West Flanders line, for the month of August, was 1615*l.* 4s. 7d. The returns comprise the amounts received by the Government for this company, for joint traffic on the State lines in connection with the West Flanders, which accounts are rendered by the Government monthly only.—*Railway Record.*

The Keymer branch of the London, Brighton, and South Coast Railway was to be opened yesterday. The Newhaven branch has also been inspected, but it is expected that its opening will be delayed, except for goods, till next season.

Railway Property.—The *Manchester Times* contains a calculation, from which it appears that, on the 2d January, 1847, the value of 57 lines of railway was 59,557,900*l.*; calls have since been made to the extent of 13,529,000*l.* Notwithstanding (or, perhaps, we ought to say, consequent on) this, the value of the same properties is now only 57,884,000*l.*

The Electric Magnetic Telegraph in Austria.—The works for the construction of the electric magnetic telegraph along the principal line, at Gratz, are almost completed; and as this telegraphic line will, also, go over the Sömmering Pass, where, as yet, there is no railway road, it will join the Austrian telegraphic station at Gloggnitz—by which means there will be an uninterrupted rapid communication between Gratz, Vienna, and Cilly, which, in the present state of Italian affairs, is of the greatest importance. Some of the peasantry, who came too near the wire, for curiosity, to examine it, received such a severe shock that they fell to the ground. This occasioned such a superstitious fear throughout the whole valley of the Murthal, that all the inhabitants are afraid to come near this wonderful machine; and it is, therefore, unnecessary to keep a watch upon the works to prevent people from coming too near.

Wheal Anna Maria Mine, Dunsford.—A large and highly respectable meeting of shareholders in this mine was held at Dunsford, on Saturday last, when a committee of management was elected, as also the other officers of the company, for the purpose of working the mine. A further report of the mining agents was read by the secretary at the meeting—all of whom, with many other influential gentlemen who were attracted to this romantic spot, were highly delighted with the prospects of the mine, and the accuracy of the agents.—*Western Luminary.*

New Copper Works at Loughor.—We announced in our last Number, that Messrs. Schneider and Co. had purchased the Spitty Works, with the view of carrying on an extensive copper smelting establishment, on Smith's patent. We have since learned, that several furnaces are now in operation. This spirited company have conferred a boon upon the district, which had been impoverished by the decay of the former works.—*Swansea Herald.*

Ballooning in Belgium.—On Monday last, Mr. Van Hecke, of Brussels, who believed that he had discovered the means of guiding a balloon through the air, by a machinery attached to a car, made an ascent from that city, accompanied by M. Dupuis Delcour. The result, however, was no evidence of the soundness of the invention; for, after rising to the height of 4500 metres, he determined to descend, believing himself to be still in the environs of Brussels; but, on alighting, found himself beyond Charleroi. The balloon, relieved by his weight, again ascended into the air, in spite of his endeavours to keep it down. M. Delcour, who remained in the car, had only time to call out to M. Van Hecke not to be alarmed. No account, however, had been received of M. D. Delcour, or of the balloon, up to yesterday afternoon.—*Paris Paper*

Current Prices of Stocks, Shares, & Metals.

MINES.—The business in mining shares during the week has been of a limited character; and, in consequence of the numerous failures, the rumoured difficulties of supposed capitalists, and the general want of confidence in the monetary world, many shares have been forced upon the market, and sold at heavy sacrifices. These, however, should not be taken as the data for quotations—nor can, in such times as the present, our share list be depended upon as giving correct prices. The exigencies of the moment compel sales at any offered price; and it would be unfair to the *bonâ fide* holders of property to allow such sales to be the fixed quotations. And it may be observed, as a general rule, in such times, that the best and most saleable shares are those which mostly suffer.

Shares have changed hands in Trehane, Condurrow, Treviskey and Barrier, Herodsfoot, Trelawney, and Mary Ann.

It is with regret that we have heard the rumour of the failure of a company connected with the smelting interest; but, as one company was named and then another, we avoid mentioning the company fixed, until we find it authenticated—at the same time, we are given to understand, that their liabilities are not to a ruinous amount.

West Providence meeting of adventurers was held, at the offices, in London, on Wednesday last, when a dividend of 25*s.* per share was declared; by the agent's report, we find the mine now looking more favourable.

Tresavean and Trethellan account meetings were held on the 28th ult., for the months of July and August—the former showing a balance of 1154*l.* in hand; and the latter, 484*l.* It is expected that the next meeting of Tresavean will give a dividend.

The Callington Mines quarterly meeting was held on Wednesday last, when the sixth dividend, of 1*l.* per share, was paid, as declared at a meeting of directors, a short time since. The directors' and agents' reports were highly satisfactory, and received with manifest approbation. The chairman exhibited some exceedingly rich stones of silver ores, broken by himself, during his late visit to the mines; and also two ingots of silver, weighing about 50 and 30 ozs. respectively—being the produce of some rich ores, which were looked upon with much gratification.

Tincroft annual meeting was held on Thursday—the accounts presented a balance of 1381*l.* in favour of the company; and the reports, which were read, showed an increase of sampling; and that about 600 tons of ore, would be sampled in August.

Some business has been done in Herodsfoot and Herodscombe shares. We stated, last week, the sampling of 90 tons of silver-lead ores from the two mines; and we now learn, that the Herodsfoot ores realised 678*l.*; and Herodscombe, 397*l.*—being rather more than anticipated.

There has been several transactions in foreign shares this week; Altens, Imperial Brazilians, and Australians, have been done at an advance, arising, no doubt, from the favourable reports received from the mines.

Advices have been received by the Imperial Brazilian Company, from their managing agent at Bananal, of a highly satisfactory character, fully realising the expectations of the company, as well as confirming the opinions of agents who have inspected the mine. By a letter from Mr. Henwood (which appears in another column), we learn that the operations of one day resulted in the returns of 16 to 20 lbs. of gold, which was taken from the lode in the bottom of the level—the company may, therefore, reasonably calculate on most important information by the next mail.

The despatches received by the Australian Mining Company are encouraging and satisfactory, as far as the operations have been carried on at the mines. Extracts from the letters will be found in another column.

The New Zealand papers represent the coal recently discovered near Nelson to be of an excellent quality, experiments having been made on board the *Inflexible* steamer, and proved superior to that supplied from the collieries at Newcastle, Australia. This discovery may be deemed of the highest importance to the commercial interest, and as affording the means of a rapid communication between these colonies and other portions of the globe.

HULL, THURSDAY.—The failures and general depression of business of all kinds, tell on the share market, and there is little disposition to buy, except at reduced rates. Guaranteed shares command attention, however, and a fair amount of business is passing in Ipswich and Bury, and Clitheroes preference 6 per cents. The former leaves off sellers at ½ prem., and the latter buyers at ½ prem.

STEAM COMMUNICATION DIRECT FROM SOUTHAMPTON TO NEW ORLEANS.—We perceive that the Royal West India Mail Steam Packet Company have entered into a contract with the Lords Commissioners of the Board of Admiralty, to come into operation on the 2d November, when their vessels will proceed direct from Southampton to Bermuda, Nassau, Havana, Cat or Ship Island (New Orleans), Vera Cruz, and Tampico, returning by the same route to England. This arrangement admits of an easy and quick conveyance to and from Southampton, and the above-mentioned places, and passengers for New Orleans will be conveyed thither from the company's vessels, on their arrival at Cat or Ship Island, by the Mexican Gulf Railway Company, who will have a steamer ready, and other conveniences provided for that purpose. The estimated time for the voyage from Southampton is as follows—To Bermuda, 16 days; Nassau, 21; Havana, 23; New Orleans, 28½; Vera Cruz, 33; and Tampico, 35 days. By the above alteration, passengers proceeding to the West Indies by the 2d of the month steamer, will be conveyed *viâ* Bermuda, and by the 17th of the month packet, *viâ* Madeira and Barbadoes. No company has done more for affording facilities to our mining interest in Mexico, Chili, Peru, and the Havana, than the Royal West India Mail Company, whose vessels, for accommodation and tightness, are duly appreciated. It has long been a desideratum, that we should receive direct news twice a month from our mining operations in Mexico and Chili, instead of only by the monthly packet of the 7th. Arrangements are making to carry out this grand object with the Mexican Gulf Railway Company, and the South Pacific Steam Navigation Company; and as a railway across the Isthmus of Panama is not only decided upon, but in actual progress of construction, further facilities will be thus afforded to our miners in the New World, for a quick and safe transit for the ores and precious metals for shipment to this country.

REMARKABLY QUICK TRAVELLING BY STEAM-BOAT AND RAILWAY.—A gentleman of Liverpool crossed in the Brighton and Continental Steam-Packet Company's boat *Newhaven*, from Havre to Brighton, on Saturday last, and reached Liverpool within 24 hours of his quitting Paris. It must be understood, too, that the time occupied by railway from Paris to Havre, although 120 miles only, was six hours and a half.

RAILWAY TRAFFIC RETURNS.

Name of Railway.	Lgth. Rway.	Present actual cost.	Price per share	Last Div.	*Traffic Returns* 1847	1846
Arbroath and Forfar	18	£179,939	26	3 *p.c.*	£231	£266
Chester and Birkenhead	15	656,293	39½	2½	777	696
Dublin and Drogheda	35	689,248	53	3½	893	1017
Dublin and Kingstown	7½	473,282	—	9	985	932
Dundee, Perth, and Aberdeen	47	285,745	35	6	873	317
East Lancashire	30½	2,207,490	15½	—	—	—
Eastern Counties	226	6,513,026	17	7	12021	9544
Eastern Union	44	581,021	60	—	1227	405
Edinburgh and Glasgow	48	2,275,435	51	6	4270	4222
Glasgow, Paisley, and Ayr	60½	1,567,281	191	7	2703	2383
Glasgow, Paisley, & Greenock	23	835,918	18½	2	1264	1135
Gt. Southern & Western, Ireland	110½	1,343,718	27½	—	2120	919
Great Western	241	9,714,939	102	8	21251	20013
Kendal and Windermere	10½	147,001	24½	—	177	—
Lancaster and Carlisle	70	1,209,913	59	—	1605	—
Lancashire and Yorkshire	92½	6,807,314	82	7	11179	11073
London and North Western	382	18,042,004	160	10	43696	43130
London and Blackwall	4	1,102,717	5½	1½	1038	1123
London, Brighton, & South Coast	137½	5,109,667	44½	7	11241	10840
London and South-Western	186½	5,835,132	57½	9	9158	7143
Londonderry and Enniskillen	14½	—	24½	—	103	—
Manchester & Leeds	147½	5,036,391	96	5½	—	7846
Manchester, Sheffield, & Lincolnsh.	49½	1,678,108	69	6	2584	1995
Maryport and Carlisle	29	414,895	—	—	730	601
Midland Company	382	7,862,274	116	7	24442	2209
Newcastle and Carlisle	65	1,184,080	118	5	2447	1629
Norfolk	70½	1,199,689	97	7	2285	1914
North British	78	1,459,958	26½	—	2780	997
Shrewsbury and Chester	17	591,158	21½	—	610	—
South Devon	29	1,061,283	28	5	1144	516
South-Eastern	157½	5,888,411	31	3½	11783	1104
Taff Vale	38	888,411	—	6½	1749	1304
Ulster	25	358,353	52	5½	676	766
Whitehaven Junction	12	91,274	—	—	232	—
York, Newcastle, & Berwick	236½	3,683,102	34	9	13022	7718
York and North Midland	196	2,483,256	75	10	10080	6194
FOREIGN RAILWAYS.						
Amiens to Abbeville	28	573,338	—	4	740	
Dutch Rhenish	87½	—	2½	—	1235	1382
Northern of France	208½	2,000,000	10½	4	10710	11720
Orleans to Tours	72	600,000	—	4	3661	2975
Paris and Orleans	82	2,011,720	43	12½	9200	8518
Paris and Rouen	85	2,082,916	33½	8½	8536	8091
Rouen and Havre	59½	—	20½	4	3116	—
Strasburgh and Basle (monthly)	68	—	8	1½	1860	10612

Total earnings for last week, £206,848, being an increase of £24,225 over last year.

PRICES OF MINING SHARES.

BRITISH MINES.

Shares.	Company.	Paid.	Price.
1000	Abergwessin	7 ..	12
512	Albert Consols	1 ..	2½
1024	Alfred Consols	4½ ..	30
256	Alternum Consols	2 ..	13
235	Andrew and Nangilles	23½ ..	11½
10000	Ayrshire Iron Company	5 ..	3½
1624	Balleswidden	9 ..	18
128	Balnoon Consols	25 ..	25
10000	Banwen Iron Co.	2 ..	—
1000	Barristown	4½ ..	8
4000	Bedford	2½ ..	4
128	Besore Lead Mine	14 ..	10
315	Birch Tor Tin Mine	24½ ..	4½
8000	Blaenavon	50 ..	20
100	Botallack	175 ..	140
120	Brower	5 ..	7
10000	British Iron, New, regis.	10 ..	15½
—	Ditto ditto, scrip	10 ..	19
128	Budnick Consols	52½ ..	40
128	Burthy	20 ..	21
100	Bwich Cwmerfin	20 ..	—
128	Callestock	17 ..	30
1000	Callington	19 ..	41
20000	Cameron's Steam Coal	4 ..	3½–¾
256	Caradon Copper Mine	9½ ..	1
256	Caradon Mines	22½ ..	17
256	Caradon United	24 ..	5
256	Caradon Wh. Hooper	20 ..	5
1000	Carn Brea	15 ..	102½
2048	Carmarthen Consols	2 ..	3
2048	Cascade	1 ..	2
112	Charlestown	200 ..	100
166	Cleveland	9 ..	10
512	Coatlithe Hill	½ ..	1–1½
1900	Combmartin	7½ ..	3
500	Comblawn	5 ..	4½
128	Comfort	45 ..	100
256	Condurrow	20 ..	35
2560	Cook's Kitchen	14 ..	5½
1000	Coombe Valley Quarry	1½ ..	2
1000	Copper Bottom	1 ..	5
1024	Cosheen	4½ ..	20
240	Craddock Moor	15½ ..	15
128	Creeg Braws	120 ..	100
500	Cubert Mine	12½ ..	17½
2048	Dartmoor Consols	2 ..	3
7100	Derwent	5½ ..	5
1024	Devon&CourtenayCon.	7 ..	2
1024	Devon Great Consols	1 ..	200
1000	Dhurode	2 ..	5
186	Dolcoath	30 ..	50
2560	Drake Walls	4 ..	4
10000	Durham County Coal	45 ..	9
3000	Dyfngwm	10 ..	12½
256	East Alvenney	6 ..	26
112	East Caradon	42 ..	42
2048	East Crowndale	4½ ..	4
512	East Combe Silver-Lead	6½ ..	6½
128	East Pool	5 ..	50
100	East Relistian	22 ..	40
9000	East Tamar Consols	1½ ..	2
—	East Wheal Albert	1 ..	3
94	East Wheal Crofty	280 ..	125
256	East Wheal Fortune	2 ..	3
128	East Wheal Rose	50 ..	1300
2048	East Wh. Rough Tor	½ ..	2
—	East of Scotland Iron Co.	2½ ..	½–1
123	East Wheal Seton	14 ..	20
256	Elborough	1½ ..	2
256	Exmoor Wh. Eliza	3½ ..	10
512	Fowey Consols	40 ..	45
6400	Gadair	2 ..	2
20000	Galvanised Iron Co.	10 ..	9½
10000	Gen. Mining Co. for Irel.	2 ..	1½
2048	Georgia Tin Mines	1½ ..	1½
256	Gonamena	31½ ..	45
128	Goonvrea	4 ..	1½
2444	Grambler & St. Aubyn	— ..	12
100	Great Consols	1000 ..	400
256	Great Callestick Moors	22 ..	25
2560	Great Michell Consols	1½ ..	3
256	Great Resugga Moor	5 ..	15
512	Gt. Wh. Rough Tor Con.	6½ ..	36
1500	Great South Tolgus	2 ..	2
100	Grogwinion	5 ..	—
1000	Gunnis Lake	1½ ..	3
256	Gwinear Consols	5 ..	15
1000	Harrowbarrow Old Mine	8½ ..	2
6000	Heigneton Down Con.	½ ..	2½
256	Herodscombe	2½ ..	10
256	Herodsfoot	14 ..	20
10000	Hibernian	12½ ..	1⅞
239	Hobb's Hill	6 ..	3
1000	Holmbush	19 ..	12
827	Kirkcudbrightshire	5½ ..	7
2048	Lamheroos Wh. Maria	10 ..	3
2048	Lanivet Consols	4 ..	2½
128	Lelant Consols	90 ..	60
160	Levant	— ..	90
1000	Lewis	15 ..	6½
1000	Llwyn Malees	5 ..	—
3600	Llynvi Iron	50 ..	60–65
256	Lostwithiel Consols	12 ..	12
128	Ludcott	3 ..	3
6000	Marke Valley	10 ..	3
5000	Mendip Hills	2½ ..	1½
5000	Merionethshire Slate & Slate Slab Co.	1½ ..	2⅝–2½
20000	Mining Co. of Ireland	7 ..	7½
256	New East Crowndale	3½ ..	3½
128	North Fowey Consols	30 ..	30
100	North Pool	45 ..	370
70	North Roskear	10½ ..	300
512	North Treburget	2 ..	3
100	North United	72 ..	15
256	North Wh. Abraham	½ ..	12
262	North Wh. Leisure	1½ ..	3½
128	North Wh. Providence	2½ ..	6
18000	Northern Coal Co.	23 ..	2
1200	Old Delabole Slate Co.	25 ..	50
128	Par Consols	900 ..	1000
4000	Pennant	1½ ..	2
100	Penrhiw	30 ..	65
1280	Perran St. George Un.	13 ..	20
128	Perran Wh. Virgin	9½ ..	15
512	Plymouth Wh. Yeoland	4½ ..	25
256	Polsaith Consols	3 ..	5½
112	Providence Mines	35 ..	45
256	Redruth Consols	3 ..	2
10000	Rhymney Iron	50 ..	30
10000	Ditto New	7 ..	6½
256	Rose Consols	10 ..	2
1000	Rosewall Hill	1 ..	5
256	Rosewarva Mines	— ..	12
—	Shotts Iron Company	50 ..	60
2500	Silver Valley	5 ..	2
1024	South Callington	5 ..	3
128	South Caradon	10 ..	450

BRITISH MINES—*continued.*

Shares.	Company.	Paid.	Price.
2000	South Dolcoath	3 ..	2½
256	Sth. Friendsh. Wh. Ann	16 ..	25
200	South Harvannah	10 ..	25
9000	South Tamar	¼ ..	¼
256	South Tolgus	2½ ..	25
800	South Towan	10 ..	1½
256	South Trelawney	15½ ..	7
128	South Yeoland	16½ ..	20
128	South Wheal Basset	110 ..	75
124	South Wh. Francis	160 ..	210
256	South Wh. Hope	— ..	5
1000	South Wh. Maria	2½ ..	2
256	South Wheal Rose	11½ ..	1
256	South Wh. Sophia	4 ..	4½
10000	Southern&Western, Irish	2 ..	4
280	Spearne Moor	30 ..	40
256	St. Austell Consols	9 ..	10
94	St. Ives Consols	— ..	320
128	St. Michael Penkivel	5 ..	10½
1000	Stray Park	43 ..	25½
9600	Tamar Consols	5 ..	4
1024	Tavy Consols	3½ ..	4
6000	Tincroft	7 ..	8
1000	Tin Vale Consols	2 ..	2½
128	Tokenbury	143½ ..	10
256	Trehane	2 ..	27
5000	Treleigh Consols	6 ..	4
2000	Trenance	2 ..	20
96	Tresavean	10 ..	250
128	Trethellan	5 ..	16
120	Treviskey and Barrier	130 ..	155
288	Trevean	½ ..	10
256	Trewollack	20 ..	—
128	Trewellard	12 ..	26½
100	United Mines	300 ..	350
256	Wellington Mines	15 ..	30
128	West Basset	45 ..	22
256	West Caradon	20 ..	140
128	West Cargoll	2 ..	12
512	West Fowey Consols	40 ..	15
256	West Grambler	7 ..	8
256	West Providence	1 ..	17½
200	West Seton	40 ..	130
—	West of Scotland Iron Co.	210 ..	212
120	West Trethellan	5 ..	35
256	West United Hills	2½ ..	4
256	West Wh. Friendship	7½ ..	8
3845	West Wheal Jewel	11 ..	1½
2560	West Wh. Maria	2½ ..	1
2560	West Wheal Rough Tor	½ ..	2
256	West Wheal Shepherd	5 ..	2½
256	West Wheal Tolgus	21½ ..	3
256	West Wheal Treasury	19 ..	10
5200	Wicklow Copper	5 ..	12
184	Wheal Adams	41 ..	10
1000	Wheal Agar	— ..	10
256	Wheal Albert	10 ..	8
128	Wheal Acland	13 ..	2
256	Wheal Allen	2 ..	5
237	Wheal Anderton	16½ ..	26
128	Wheal Ann	— ..	50½
512	Wheal Ann, Bridford	1 ..	2
512	Wheal Anna Maria	— ..	5
128	Wheal Arvose	3½ ..	3½
1024	Wheal Ash	3 ..	12
120	Wheal Bal	5½ ..	20
2560	Wheal Barbara	1½ ..	4–5
256	Wheal Benny	6½ ..	3
256	Wheal Blencowe	8 ..	5
256	Wheal Bucketts	20 ..	18
256	Wheal Byon Consols	½ ..	½
256	Wheal Calestock	8 ..	4
136	Wheal Clifford	190 ..	190
128	Wheal Courtenay	— ..	20
6000	Wheal Curtis	2 ..	2–2½
256	Wheal Dyke	12 ..	13
256	Wheal Fortescue	6½ ..	8
512	Wheal Fortune Consols	3½ ..	6½
2048	Wheal Frederick	2 ..	2
388	Wheal Franco	27 ..	32
1024	Wheal Grace	3 ..	2½
128	Wheal Harriet	45 ..	50
256	Wheal Jane	21 ..	15
256	Wheal Louisa	8½ ..	8
112	Wheal Margaret	79 ..	250
256	Wheal Maria (Hayle)	24 ..	10
4000	Wheal Martha Consols	5 ..	—
512	Wheal Mary Ann	5 ..	20
256	Wheal Mary Consols	38 ..	25
256	Wheal Mary (Lanivet)	6½ ..	4
256	Wheal Maude	1½ ..	1½
210	Wheal Prospect	4 ..	7
120	Wheal Reeth	97 ..	30
128	Wheal Rose	60 ..	45
2048	Wheal Samson	— ..	20
99	Wheal Seton	214 ..	1100
256	Wheal Sisters	29½ ..	35
256	Wheal Sophia	4½ ..	10
128	Wheal Spearne	10 ..	75
128	Wheal St. Ann	9 ..	15
260	Wheal Trelawney	7½ ..	95
256	Wh. Tremaine(St. Ervan)	1½ ..	20
256	Wheal Tremayne	35 ..	25
128	Wheal Trew	20 ..	21
256	Wheal Trevenna	3 ..	4
92	Wheal Tryphena	140 ..	265
128	Wheal Veniand	12½ ..	10
256	Wheal Vlow (Perranz.)	¾ ..	¾
184	Wheal Vyvyan	— ..	60
256	Wheal Williams	6 ..	6

FOREIGN MINES.

5000	Altens Mining Company	14½ ..	5½
15000	Asturian Mining Co.	10 ..	7
20000	Australian	2 ..	3½
10000	Anglo-Mexican Co.	100 ..	2
12374	Ditto Subscription	25 ..	2½
3000	Bolanos	150 ..	5½
2000	Ditto Scrip	15 ..	5½
12000	Brazilian Imperial	22 ..	8
10000	Cobre Copper Co.	40 ..	18
8500	Colombian Co. regis.	55 }	1
5000	Ditto Scrip	5½ }	
5000	Coplapo Mining Co.	14 ..	2½
10000	General Mining Ass'n.	20 ..	15½
5000	Kinzigthal Mining Ass.	2 ..	2½
20051	Mexican Company	59 ..	—
2000	Mexican & SouthAmer.	7 ..	1½
5000	Mocaubas & Cocaes	25 ..	6–6½
29320	Rl.del Monte, regis.	28½ ..	av. 2
	Ditto unregistered		
	Ditto Red Debentures	— ..	20
	Ditto Black ditto	— ..	14
	Ditto Loan Notes	150 ..	97½
7000	Royal Santiago	10 ..	6
2000	Pachuca Mines	4 ..	4½
11000	St. John del Rey	15 ..	7
43174	United Mexican	28½ ..	2

MISCELLANEOUS COMPANIES.

Shares.	*Companies.*	*Paid.*	*Div. p. cent.*	*Price.*	
10,000	Assam Tea Company	£20		£	
1,080	Auction Mart	—		£	
10,000	Australian Agricultural	30	1	20	22
10,000	Australian Trust	35	—	30	
8,000	British Alkali	25	4	16½	16½
10,000	British American Land	35½	—	14	
8,600	British Rock and Patent Salt	35	18	11	
8,915	Canada	29½	6	28½	30
—	City Bonds (Navigation)	—	3½	89	
1,800	Corn Exchange	57½	12	26½	
5,000	Droitwich Patent Salt	25	½*	11	
2,700	Equitable Reversionary	95	4*	87	90
—	General Reversionary Interest	100	5	104	106
20,000	General Steam Navigation	14	1½*	23½	
—	Hudson's Bay Stock	—	10	230	240
2,100	Hungerford Market	100	—	—	
1,500	London Commercial Sale Rooms	—	1½	31	32
8,000	London Reversionary	22	—	23	24
300	Margate Pier	—	10	195	
10,000	Mexican and South American	7	—	3½	4
20,000	New Brunswick	75	—	—	
11,600	Peninsular and Oriental Steam	50	7	57½	
6,600	Ditto	40	—	—	
5,387	Reversionary Interest Society	100	4½*	97	
—	Royal Mail Steam	—	5½	52	
8,000	South Australian	25	6	—	
20,000	Upper Canada	100	5	93	94
20,000	Ditto	—	5	93	94
10,000	Van Diemen's Land	20	—	3	4

* Those marked with an asterisk (*) are dividend per share.

WHEAL SOPHIA MINE.—Notice is hereby given, that the next GENERAL MEETING of the shareholders in this mine will be HELD at the Bennetts' Arms Inn, in the parish of Lawhitton, in the county of Cornwall, on Thursday, the 7th day of October next, for the purpose of making a call, auditing the accounts, and other business.—Dated Sept. 29, 1847. DANIEL WARD, Purser.

LATEST CURRENT PRICES OF METALS.

LONDON, OCTOBER 1, 1847.

	£ s.	£ s. d.		£ s.	£ s. d.
IRON—Bar a. Wales...ton	8 12 6	8 15 0	COPPER—Ord. bottoms ..	0 0—	0 0 12
,, ..London ..	0 0—	9 15 0	YELLOW METAL SHEATHING	0 0—	0 0 9½
Nail rods ,, ...	0 0—	10 15 0	TIN—Com. blocks...cwt.	0 0—	4 5 0
Hoop(Staf.),, ...	0 0—	11 15 0	,, bars	0 0—	4 6 0
Sheet ,, ...	0 0—	13 0 0	Refined	0 0—	4 10 0
Bars ,, ,, ...	0 0—	11 5 0	Straits	0 0—	4 2 0
Welsh cold-blast foundry pig ..	4 10—	5 5 0	Banca	0 0—	4 4 0
Scotch pig b, Clyde	3 4—	3 6 0	TIN-PLATES—Ch., IC, box	1 8—	1 10 0
Rails, average	0 0—	9 0 0	,, IX ...	1 14—	1 16 0
Chairs	5 15—	6 0 0	Coke, IC	0 0—	1 5 0
Russian, CCND c..	0 0—	——	,, IX	0 0—	1 11 0
,, PSI	0 0—	——	LEAD—Sheet £ .....ton	19 7 6	19 10 0
,, Gourieff	0 0—	——	Pig, refined	0 0—20	5 0
,, Archangel	0 0—13	10 0	,, common	0 0—18	10 0
Swedish d, on the spot	0 0—11	5 0	,, Spanish, in bd.	0 0—18	0 0
,, Steel, fagt.	0 0—16	5 0	Red	0 0—19	10 0
,, ,, kegs	14 15—15	0 0	Dry White	0 0—24	0 0
COPPER—Tile	0 0—97	0 0	Shot (Patent)	0 0—21	0 0
Tough cake	0 0—98	0 0	SPELTER—(Cake) on spot	0 0—18	15 0
Best selected	0 0 101	0 0	,, ,, for arrival	0 0—18	15 0
Ordin. sheets, b...	0 0—	0 0 11	ZINC—(Sheet) ex export.*	0 0—27	0 0
			QUICKSILVER .....lb.	0 0—	0 4 6

MONTHLY REPORT.

IRON.—Welch bars are still in good demand, and the price is consequently firm; the same may be said of Staffordshire. Scotch pig declined a little during the latter part of September, owing to several parcels having been thrown on the market by parties desirous of realising, but most of the purchases were for home use. The majority of the men who had struck have returned to their work, at the reduced wages proposed by the masters. A few sales of Swedish have been reported for the American market. In steel, nothing doing.

COPPER remains steady, with a fair demand. About 240 tons of refined Chilian, in ignots, and a small parcel of slabs, have been recently imported here: the former is held at 93*l.*, and the latter at 84*l.* per ton. The 100 tons of Altens are nearly all sold, at about 94*l.* to 95*l.* per ton.

TIN.—English and foreign continue at our quotations of the 2d Sept.: the demand for each, till within the last fortnight, was good, but since then very little has been done in either. The stock of the former with smelters is small, and there are 80 tons less of the latter to-day than on the 1st Sept., the present stock of Banca and Straits being 401 tons.

TIN-PLATES are in limited request, but prices are steady.

LEAD continues in good demand, but scarcely anything doing for exportation. American is much inquired after, but there is none, either here or at Liverpool.

SPELTER—The transactions in last month were remarkably few, scarcely any sales having been made; the price, however, has only declined 5*s.* per ton, and holders are firm at 18*l.* 15*s.*, both on the spot and for arrival. The stock on hand is 3010 tons.

GLASGOW PIG-IRON TRADE, SEPTEMBER 30.—The business done this week in Pig-Iron has been moderate in amount. Commercial embarrassments, and the continued tightness in the money market, have caused a further decline in prices. Several sales of mixed Nos. have been made at 64*s.*, cash, at which we quote the price to-day.

LEAD ORES.

TICKETING FOR 120 TONS FOXDALE (Isle of Man) LEAD ORE.

Bagill, Sept. 24, 1847.

Messrs. Walker, Parker, and Co. ..... £10 8 0 per ton.
,, Mather and Co. ..... 10 6 0 ,,
,, Newton, Keates, and Co. ..... 10 1 0 ,,

Sold at Liskeard.

Herodsfoot	32	£10 4 0	....	Tamar Company.
ditto	28	12 11 0	....	Dr. Somers.
Herodscombe	30	13 5 0	....	[illegible]

Sold at Aberystwith.

East Logylas	55	£9 15 0	....	[illegible]
ditto	55	9 15 0	....	[illegible] Keates, & Co.
Penpompini	27	10 7 6	....	[illegible] Company.
Bog	24	9 9 6	....	[illegible]
Nantery	28	9 0 0	....	ditto

Sold at Holywell on the 11th Sept.

Penyrhanblas	40	£10 11 0	....	Mather & Co.
ditto	40	10 11 0	....	Walker, Parker, & Co.
Westminster	60	9 15 0	....	Mather & Co.
ditto	15	10 0 6	....	Walker, Parker, & Co.
Belgrave	20	10 0 0	....	Mather & Co.
Jamaica	25	9 13 0	....	Walker, Parker, & Co.
ditto	25	11 11 0	....	Mather & Co.
Bwlchycdwfryn	10	10 0 0	....	ditto
Halkin Hall	7	9 6 0	....	ditto
Fronfownog	60	10 1 0	....	Walker, Parker, & Co.
ditto	10	11 11 0	....	ditto
Peel	120	10 8 0	....	ditto

BLACK TIN.

Mines.	*Tons.*	*Price per ton.*	*Purchasers.*
Charlestown	22½	£45 0 0 ..	Daubuz and Williams.
ditto	11	45 0 0 ..	Calenick Smelting Co.
ditto	1½	33 0 0 ..	ditto

COPPER ORES.

Sampled Sept. 15, and Sold at Pearce's Hotel, Truro, Sept. 30, 1847.

Mines.	*Tons.*	*Price.*	*Mines.*	*Tons.*	*Price.*
United Mines	137	£3 17 6	Perran St. George	32	£3 3 0
ditto	106	6 2 0	ditto	31	2 16 6
ditto	102	3 0 0	ditto	25	1 4 6
ditto	91	6 10 0	Bolenna	23	7 8 6
ditto	89	3 16 6	ditto	22	2 10 0
ditto	81	2 17 6	Par Consols	103	5 2 0
ditto	73	4 3 6	ditto	83	7 5 0
ditto	71	3 0 0	ditto	62	4 18 0
ditto	67	7 11 6	Trethellan	84	2 2 6
ditto	66	3 7 6	ditto	41	2 9 0
ditto	64	4 12 0	ditto	38	2 9 6
ditto	48	3 1 6	ditto	25	1 8 0
Consols	103	6 6 0	St. Aubyn	69	2 7

NOTICES TO CORRESPONDENTS.

It will at all times save much trouble, and frequently considerable delay, if communications are simply directed—

To the Editor,
Mining Journal Office,
26, Fleet-street, London.

Also, to avoid trouble, Post-Office Orders should always be made payable to William Salmon Mansell, as acting for the proprietors.

In a late Number, we apparently outstepped the limits to which our paper is expected particularly to adhere; but, as we then stated, we consider ourselves bound, as public Journalists, to take some notice of the great domestic events and questions of the day. In these subjects the interests of the whole community are united, no matter to what profession, or pursuit, they are called in their daily avocations. The miner and the engineer are as much affected by any important change in our social system, as any other class of her Majesty's subjects; and certainly every one has a right to be made acquainted with the course, or progress, of the national welfare. A portion of the aggregate profits of each individual in the country returns, through different channels, to extend the operations of their respective branches of industry; but these, when carried a certain length, naturally find their level; and it is to what may be called the aggregate *savings* that mining, in a great measure, owes the means of carrying on and extending its developments. In proportion, therefore, as the country prospers, will capitalists be attracted to embark in mining operations, for then will their surplus profits enable them to do so. We intend in future to pay more attention to that department, which properly comes under the third head, included in the title of our Journal—we mean the "commercial" topics of the day; and we shall briefly allude to those political questions with which the public interest and attention are principally concerned. But while, as opportunity may occur, we thus propose to devote a short space to these subjects, our chief care and object shall continue to be to give a true (and, as far as we are able), a perfect chronicle of everything that pertains to mining industry, including a faithful representation of the merits of such mechanical inventions as come under our notice.

We must impress upon our correspondents, the necessity of invariably furnishing us with their names and addresses; not that their communications should consequently be noticed, but as an earnest to us of their good faith.

Received—"J. D. N."—"J. K. B." (Bristol).—"G. J."

The Mining Journal is published at about Eleven o'clock on Saturday morning, at the office, 26, Fleet-street, and can be obtained, before Twelve, of all news agents, at the Royal Exchange, and other parts of London.

THE MINING JOURNAL

Railway and Commercial Gazette.

LONDON, OCTOBER 2, 1847.

There is no richer gift which Nature can bestow on a nation, or one section of a commonwealth convey to another, than the gift of its industrious citizens. Gold, silver, and precious stones—mines, fields, forests, and navigable rivers—are but dead and inoperative gifts, unless you give also the contriving mind, and the labouring hand, by which they may be fashioned out to ends of utility and fruitfulness. This is a preamble—not one whit too florid—to usher in the simple, but interesting, announcement, of the departure of above 100 Cornish miners, to reinforce the mining strength of the county of Durham. It is no extradition this of men, or of arts, from the provinces of the imperial isle. The men of Cornwall will recognise in the men of Durham, their brethren—their juniors—and, perhaps, their inferiors—in mining ability and experience; for these men, from the foot of the kingdom, are the descendants of those who successfully wrought in mines when Phœnecia was the great, and almost the only, maritime and commerical state trafficing with Europe, and before the Romans had, as yet, become a people. They carry with them, therefore, their own, and also a long traditionary experience, which they are likely, as they have long done in Cornwall, to apply successfully to the new scene of their labours in the northern extremity of England. There are arts peculiar and indigenous to every district, which, nevertheless, suffer nothing by transplantation. In this instance, Durham is the gainer, and Cornwall the loser, by the transfer of the mining activity, and the industrial skill of a portion of its people; but this is as it should be—for it is indicative of the flourishing and profoundly-organised state of the social elements, when no one member can truly say to another, "I have no need of thee." We shall follow these adventurers into the new scene of their exertions with the warmest wishes for their welfare and success; and hope, in due time, to hail their return to their temporarily-abandoned homes like bees, who have industriously filled up the summer's dawn, laden with such benefits as their activity promised them the possession of; or, like that more ancient band of adventurers, who returned with all they sought, when they came back from Colchis with the golden fleece.

The Legislative Assembly of the country having adjourned its arduous labours for a time, and the storm and bustle of a general election having subsided, giving place to a calm, and a quiescence of that excitement and animation which periodically attend the discussions of the national interests, we cannot have a more appropriate time for deliberately considering the merits of the important changes carried into effect by the late Parliament. The remarks we are about to make may also, at the present time, possess their interest to many, and particularly our foreign readers, to whose attention has been directed to the proceedings of the Great European Congress, lately held at Brussels. We should not undertake to defend, even if it were necessary, any particular party from the charges of inconsistency, which have been so largely indulged in; but we think this question has been satisfactorily set at rest by many abler pens than ours, and we consider that it would be worse than idle to take any notice of the silly and offensively abusive style of some of our contemporaries. We look, in fact, upon the late House of Commons as having been divided into only two important parties—those who advocated and supported a progressive policy, and those who, on the contrary, resisted every such change, and did all in their power to keep the great interests of the country in *status quo*. There were, it is true, in each, men whose opinions did not exactly coincide on many minor points, and who, indeed, were disposed either not to go so far, or to go further, than their respective leaders wished them; but still each section was unanimous in one great object—namely, a relaxation of the burdens on commercial intercourse on the one side, and on the other the maintenance of restrictive duties, under the plea that they were necessary for the protection of native industry. A noble lord was the acknowledged champion of the latter party; and although, "unaccustomed as he had been to public speaking," he was selected to head a select number of adherents, and, resigning "the government of the horse," he became the commander of the "infantry." Our readers are, no doubt, well acquainted with what success his attacks on his opponents were attended; and we shall now briefly comment upon some of the arguments contained in the "manifesto," which lately appeared as a justification of the conduct of the "Protectionists" and their leader. We cannot do this better than by taking a cursory review of a pamphlet which has just been published, entitled, *An Answer to Lord George Bentinck's Address to the Electors of the Borough of King's Lynn, on the Eve of the General Election of* 1847," &c., the author of which assumes the name of "Plain Facts," and adopts as his motto a quotation from *Virgil*, which, in plain English, may be translated—"I will acknowledge everything that is true, whatever it may be." We shall endeavour to follow him in the same candid and impartial spirit, in alluding to a few of the principal topics to which he directs our attention.

Those persons, who endeavour to work the great engine of society on the "non-expansion" principle, would seem to run counter to the law of Nature, which provides peculiarities of soil, water, and climate, for different regions of the globe, and connects men together by the bond of their mutual requirements. On a consideration of this, and other *à priori* arguments for freedom of commercial intercourse, we should be led to anticipate that great practical advantages would result from its general adoption. At the same time, we can scarcely agree with "Plain Facts," that the experience of five years is alone sufficient to test the truth of any great doctrine. We are told by some, indeed, that the one he advocates has been verified by a far more extended trial; but we are here also at a loss to conceive upon what grounds this assertion is made. The attempts to act upon a "free-trade" policy, previous to 1841, were of so partial and trivial a nature, and were so far from affording undeniable data favourable to the pursuing of that policy, that, in 1840, 10 per cent. was *added* to all Customs duties, for the purpose of increasing the revenue, by those very people (the Whigs), who are generally understood to have been most liberal in their ideas, and among whom there are some who profess to have been many years convinced of the truth of free-trade principles. To the results, so far as they have gone, of the experiments of the last six years, may be almost entirely attributed any favourable proofs for continuing in the same line of policy. Statistical facts are apt to mislead, unless in drawing inferences therefrom, together with a patient and lengthy scrutiny of the facts themselves, we combine an accurate weighing of all the circumstances which may indirectly influence the result. But the science of political economy, so called, may also be tested by an examination of the history of all nations, by tracing the effect of different commercial measures, whether in a right direction, or in a wrong; and by analysing the conduct of communities, and even of individuals, in their dealings with each other. The principle at which we should hereby arrive—viz.: the unrestricted interchange of peculiar natural products—seems so indisputable, that we should expect to find some false reasoning in the arguments of those who contravene it. Accordingly, "Plain Facts" has clearly pointed out the inconsistencies of which Lord George Bentinck has been guilty, in his *Address to the Electors of King's Lynn*—to some of those we shall proceed to allude, and refer our readers, for a more detailed account, to the above-mentioned able production.

Lord George Bentinck infers that Ireland was not in a famishing state in the first half of 1846, *because* she exported largely of corn and cattle, during that period, to England. Those who know Ireland, need hardly have recourse to statistical facts for an answer. "Plain Facts," however, shows us that, during the latter half of that year (1846), and beginning of 1847 (when Lord George does not pretend to question the existence of famine), the exportations of grain still continued very large, while that of oxen and sheep had very greatly increased—thus proving that the argument of the noble lord was erroneous, as giving any criterion of the condition of a vast proportion of the population of that country.

We next find Lord George Bentinck quoting the evidence of Lieut.-Colonel Macgregor, for the purpose of showing, that the potato crop of 1845-46 was not much below the average; but, whatever inference to this effect might be drawn from the low prices of the vegetable, is fully counterbalanced by the colonel's own admission, that the cheapness was the consequence of incipient or actual disease in the potato itself. We also find Lord George, in order to make a point, contrasting the *highest* price of one year with the *average* of another; and, further on, he reasons upon the fact of more foreign grain being *consumed* in 1844-45 than in 1845-46, without attending to the circumstance, that the *importations* were larger in the latter, but were not entered for consumption, by reason of the prospect of a reduced duty. In this, we may perceive one of the evil effects of the late Corn Law, which, by its fluctuations of duty, had a tendency to prevent grain from being entered for consumption till the very last, to render the supply uncertain, and the whole trade a gambling speculation.

But his lordship's strangest inconsistency is ingeniously and distinctly pointed out by "Plain Facts," in his pamphlet now before us. In his late manifesto, the noble lord asserted, that we must wait for a succession of better seasons, before pronouncing judgment on the ultimate effect of Sir R. Peel's measures; and, in the same breath, informed us, that we were *now* in a condition (*i. e.*, although, "*as yet*, this vast free-trade experiment has only been tested under circumstances of *famine*,") to pronounce an immediate decision thereon! The noble lord denies, by implication, that the abolition of the Corn Laws will make bread cheap; and, subsequently, predicts that the average price of corn will not rise above the low one of 45*s.* per quarter!

We have often been told by the Protectionists, that foreign countries would not take a larger amount of our produce and manufactures, in return for our increased demand for their commodities; they appear, however, to have made this assertion without any substantial reasons. "Plain Facts" has shown, from official documents, that to those countries from which we obtain the greatest supply of cotton and wool, our exports had very materially increased between 1841 and 1845, while within those periods the duty on the raw materials was, in the first place, greatly reduced, and then totally repealed. The consequences of the late severe calamity, with which nearly the whole of Europe was visited, no doubt afford pleasing data to the gentlemen of "restricted ideas," for temporarily propping up their ricketty position; but when, in the words of their noble leader, "the confusion created by the late extraordinary calamity has passed away, and the agricultural and commercial atmosphere has become clear," if not wilfully blind to conviction, we shall likely have the gratification of rejoicing over more than one repentant sinner, and of admitting a few of our "old-fashioned countrymen" into the bonds of more liberal citizenship.

We shall content ourselves with these observations, and refer our readers for a more complete exposition of his lordship's very remarkable reasoning, and for other interesting and important matter, to the answer to his address by "Plain Facts." The noble Protectionist's style of argument induces us to adopt the phraseology of the *Standard*, and to exclaim with wonder, though not with admiration, at his lordship's "*incredible* accuracy!"

THE EXPLOSION OF THE *CRICKET*.

We last week recorded in our Journal the verdict in the case of the explosion of the *Cricket*—we now, according to promise, return to the subject. The first inquiry that will be naturally made is—Has the investigation tended to lay before the public the true cause of the unfortunate calamity, to protect that public in future, and what are the facts elicited? We learn, first, from the evidence of the witnesses Edwards and Knight, that the valves were tampered with *from the time Clark* was first appointed to the situation of superintendent engineer; we are then favoured with specimens of gross ignorance on the part of all connected with the company, with the single exception of Capt. Martin, who gave his evidence in a clear manner, answering readily every question put to him. We then come to the evidence of Mr. Lloyd, which tended to show that the construction of the boiler was bad—that the iron was of too inferior a quality for the purposes to which it was applied—that the boiler was inefficiently stayed, the workmanship inferior, and that it was altogether insufficient to sustain for any period the pressure intended to be employed, which, according to Mr. Lloyd, amounted at its maximum to 66 lbs. on the square inch; but he intimated that, in his opinion, the pressure at the time of the explosion must have been somewhat over 120 lbs., founded on the fact that the unexploded boiler, when subjected to hydraulic pressure, commenced rupture at 120 lbs., and, when the pressure had increased to 136 lbs., the pumps were insufficient to farther increase the pressure, owing to the leakage at the parts which had given way. No evidence was brought forward tending in the slightest to inculpate the unfortunate engineer of the day—no proof that he had followed the practices alleged to have been *first* introduced by his superintendent, Clark—and yet the jury returned a verdict of "Manslaughter" against one, who was not proved to have followed the alleged improper practices of his predecessor, but who, unfortunately, was merely officiating as engineer at the time of the calamity—consequently, doomed to bear all the odium that, if we are to credit the evidence, belongs solely to his superintendent. What have the labours of the jury done towards placing before the public a true state of affairs, if we have to refer to their verdict for it?—Nothing; they have evidence adduced—evidence which, until a recent period, they could not have obtained—that of Mr. Lloyd, who is chief engineer and inspector of machinery to the Royal Navy, and who was appointed, in conjunction with Mr. Hughes, to investigate this occurrence, and report thereon to the Board of Trade—that the formation of the boiler was bad, through the employment of a plate 5 feet in diameter, the strain on which, at 66 lbs. to the square inch, would have amounted to 83 tons; and that this strain was not supported equally over its area, amounting to some 2827 square in., but thrown entirely upon the circumference, consisting of some 188 in., and aided only by the stay A1, leads in a diagonal direction upwards, and by the stay A2, at the back of the boiler (as shown in diagram in last week's Journal); the iron, too, when tried at Woolwich by the testing machine, only exhibited an average tensile strength of 17 tons, but a fraction over common Stafford plate; whilst that employed at Woolwich, of the same thickness, and employed there for boilers working at about *eight pounds* to the inch, instead of *eighty*, to which, be it remembered, the *Cricket's* had been subjected, bore an average strain of 21¼ tons. It was in the evidence, we grant, of the boiler-maker, that the iron was supplied by the firm of Martin Moser, the mark B B H, that of the Broomfield Iron-Works; that he paid 16*l.* per ton for the ⅜-in. iron, and 20*l.* for the tube plates—but no evidence was called to rebut the assertion of its low tensile strength, as stated by Mr. Lloyd, or as to the inferior quality of the workmanship; the boiler, as originally made, was to sustain only a pressure of 50 lbs., whilst it had been subjected to 80, which must have increased the danger of rupture.

All this appeared in the evidence; not a single disinterested witness was called to disprove one single fact; and yet the jury gave their verdict of manslaughter against Henry Robert Heaseman—having it in direct evidence that the boiler was not fit for the service for which it was employed: that it had been subjected to the deteriorating effects of over-straining by others, absence of water, &c., prior to his being unfortunately placed in charge of her machinery; yet the verdict is trumpeted forth to the world, as it might have been had every thing been perfect, every thing well used, and no evidence adduced against any portion of its manufacture. Was ever a greater slur thrown on the opinion of any scientific gentleman than has thus been cast on Mr. Lloyd: his evidence is received in the main—nay, even concurred in by both the manufacturers of the machinery, and by the proprietors of the vessel—yet no notice is taken of it by the jury. The world are left to imagine, that the engineer, Heaseman, was the sole cause of this calamity; that the acts of his predecessors—admitting that every thing had been of sufficient strength, in the first case—had in no wise tended to weaken the boiler; and the public are led to imagine, that every thing is correct in the other vessels of the company, although it was stated that their boilers (which, be it remembered, are of greater capacity, being one single boiler in each) are of a somewhat similar construction, stayed the same, and subjected to even a higher pressure, if we are to believe the pressure-gauge correct in either of the vessels, than even the *Cricket*. Why, if the boilers are as secure in those vessels, and so much stronger, even to come up to the calculated strength, which was so much carped at when stated by Mr. Lloyd, are plans of them not laid before the public, competent judges courted to inspect them, and report as to their safety or otherwise? We are not aware of such having been the case, up to the present period; but we are aware, that practices, in vogue before the explosion of the *Cricket*, still maintain since its occurrence. We ask, are not the facts, as stated by the *Times*, borne out, as to the proprietors of the company?—that, "they asked nothing, examined nothing, ascertained nothing; they took a barrow-load of halfpence from each pier every night, and, so long as they gave only a certain amount of Welch coal in exchange, they cared even less for the public than the public seems to have cared for themselves." We shall again return to the subject.

New Zealand Coal.—The following official report, made by order of the Colonial Government, was published in the New Zealand Government *Gazette*, of March 31, 1847:—"Her Majesty's steam-sloop *Inflexible*, at Auckland, New Zealand, March 27, 1847.—Sir: In compliance with your request, contained in your letter of the 24th inst., that I should report on the nature and quality of the coal put on board her Majesty's steam-sloop, under my command (at the colonial expense, by his Excellency Governor Grey), at Port Nelson, with a view to try its fitness for the use of steam-vessels, I have the honour to inform you, that I have taken the opinion of Mr. Tucker (the first engineer) on the subject, and have received a most favourable report on the same. I am enabled, moreover, to prove this by the duty done by the coal; for we find, by a comparison with the best Newcastle (Australia) coal, obtained at Sidney, the following to be the result:—Newcastle (Australia) coal, 14½ revolutions on 3d step of expansion, 24 cwts. per hour. Nelson coal, 15½ revolutions on 3d step of expansion, 25 cwts. per hour. Thus, it will be seen, that, from about equal quantities of fuel, equal work has been obtained; but there is one peculiarity in the Nelson coal, which is, being much slower in combustion than the Newcastle coal, and, therefore, would not furnish steam for the cylinders with equal rapidity, to enable the vessel to go at her *greatest* speed in smooth water; but it is far more economical, when all weathers are considered. This would make it highly advantangeous when mixed with the Newcastle (Australian) coal, as the bad qualities of both would then be counteracted. In justice, however, to the Nelson coal, I ought to observe that it is mere surface coal, and not obtained from a pit, like the coal of Newcastle, and has been, for more than six months, lying on the open beach, where it was placed for the use of the *Driver*, had she touched at Nelson. As only 33 tons were received for trial (that being all on the spot), I am not able to make as full a report as I could wish. Should you, therefore, be pleased to order a larger quantity to be placed at the depôt at Wellington (I would advise not less than 100 tons), obtained, if possible, from a little below the surface, and subject to rejection, if, on inspection, it be deemed not equal to that already received on board, I do not doubt but that I shall then be able to make a full and satisfactory report.—J. C. Hoseason, Commander.—To Capt. Graham, C.B., her Majesty's ship *Castor*, and Senior Naval Officer at New Zealand."

Mining in South Australia.—There are advices from this colony on the 20th of May. The completion of the South Australian Mining Association's deed of settlement made quite an event in Adelaide—and, coupled with the highly favourable reports from "Stock's shaft," had a tendency to influence the market value of shares. It was contemplated by the Government to erect a lighthouse, in lieu of the lightship till then in use at the bar. An offer had been made to the Government to erect the lighthouse with suitable apartments for the pilots, on the bar, near the moorings of the vessel, for the sum of 5000*l.*, and an estimate was to be laid before the council, with a view to its being carried into effect. The present vessel had already had a large sum expended on her for repairs.

"The Mines of Australia.—These mines are, upon a special survey, of 20,000 acres, distance about 96 miles from Adelaide—this survey was taken in consequence of large masses of copper ore which were discovered upon the extremities of the survey. The proprietors of this survey have secured to themselves the full extent of mineral land, inasmuch as the lodes run longitudinally through the survey. This has been proved by the workings which have been carried on, more especially in the northern half, where the principal lode shows a course of north about 35° west. The general and almost unparalleled richness, as well as extent, of this mineral property, is partly proved by the fact, that during the first year's operations, 7200 tons of ore were extracted. Some portions of these being the first shipments, have already been sold in the Swansea market, and realised from 10*l.* 16*s.* to 31*l.* 3*s.* per ton; as these, however, were principally surface ores, and as there existed, during the first year, no available means for their due preparation, such as cleaning and classifying for exportation, the average return has proved more favourable than was expected. The last accounts from Swansea state, that the Burra ores are in great favour, in consequence of their great docility in the process of smelting. From the assays which have been made here of the generality of ore, the quality has varied considerably, and since the shipment of surface ores had been from 25 to 30. Red oxides, grey ore, blue and green carbonates, and malachites, are the different descriptions of ore which have been extracted, and some specimens of native copper have recently been found. As the workings in the southern half have not been formally carried on to the same extent as in the northern half, the amount of extraction has not been very considerable. All experienced miners who have visited this district conclude that, judging from the surface indications, which are very numerous, and the many east and west branches, which join the main lode—some of which are from 1 to 2 ft. and upwards wide, and contain copper ore, which, if well cleaned, would be a good marketable article—this district is the richest that has yet been discovered, and will eventually prove as valuable as the Burra or Monster Mine.—*S. Australian Reg.*

Mining in Algeria.—The accounts from Algeria, referring to the progress of mineral research in that country, state that active progress had been made in the establishment of iron-works at Bona, through the enterprising industry of the Bassano Company. The product of the neighbouring mountains would be conveyed to these manufactories, and thus rendered available on the spot. The Mining Company of Mouzaïa were exploring in that district for copper, and considerable success, it is stated, had attended their operations; mines of the same metal existed in the locality of Tenes, which would be entered upon by another company of French capitalists so soon as the Government awarded them the requisite concession. The general reports from Algeria speak of extensive mineral indications throughout the colony.

Mining in New South Wales.—The ore from Molong Copper Mine is beginning to arrive in town. Two drays, containing about five tons, delivered their lading at Kellie's wharf, yesterday, and other drays are on their way down. The ore appears rich and heavy, and yields, we are informed, the large average of 40 per cent. of copper, and, as the surface ore is removed, it is expected the lode will be richer. The Molong Mine is worked by a company having a capital of 5000*l.*, raised in 500 shares of 10*l.* each, and so profitable is it expected to be, that 100 per cent. premium has been refused for shares. The land belonged to the Rev. Mr. Robart, of Parramatta, and had been considered of little value until the copper was accidentally discovered, when it at once became of importance. It has been leased to the company for the term of 50 years. The long distance from Sydney is the great drawback to the profit of the company; but it is estimated that the large quantity of dead weight constantly required for the ships loading with wool, will make shipmasters anxious to convey the ore home at so low a freight that the cost of conveyance from the mine to England will not exceed that paid by the South Australian ore, the freights from Adelaide to London being high. It is said that the Molong ore is free from sulphur.—*Sydney Herald.*

Discovery of a New Iron Mine in France.—The Forge and Foundry Company of Denain, in conjunction with the Mining Company of Anzin, having agreed to work together the coal fields they have had conceded, are also about exploring the carbonated iron veins which exist in that district. Although the operations as yet have been very confined, still the discovery of beds of iron ore is of great importance to the metallurgic industry, which will thus have the means of obtaining a supply of ore; and, above all, one vast advantage is, that the ore is found in the same superficie as the coal seems—a circumstance which has been the making of the mining districts of Staffordshire. In the commune of Damousies they have discovered a bed of carbonated iron, which is considered of such importance, that a steam-engine has been erected, to serve both for extracting the ore and for carrying off the water.

Railway Iron Bridges.—One of the most important steps taken by the executive is the appointment of the "iron commission," from which most important results are expected, as the theory, as well as the practical construction, of suspended iron arches will be fully investigated, and that, too, before any serious expenditure is incurred in the stupendous works which so materially concern the public safety. The commissioners' attention will also be engaged with two inventions of much importance—one by Capt. R. S. Warrington, the inventor of the ventilating apparatus fitted to the *Growler* and other vessels; and one by a Mr. Sadler, of a balance bridge, on the principle of the balance, whereby the *vis inertiæ*, the dead weight, of suspended iron for arches will be considerably lessened.

Lead Lode in Penzance Harbour.—A rich lead lode, 16 inches wide, has been discovered in this harbour, during the progress of the works here. If our criminals were employed in moderate labour around the shores and harbours of this country, how much available wealth might be discovered.—A. T. J. Martin: *Penzance, September* 25.

PROGRESS OF FRENCH MINING INDUSTRY.

[FROM OUR PARIS CORRESPONDENT.]

Thinking that a full and complete account of the extraction and importation of copper ore, and the manufacture of copper in this country, would be interesting to your readers, from its having a certain bearing on the great question of copper duties in England, I determined to make as complete a compilation as possible from the statistical returns relative to metallurgic industry, which have recently been published by the department of Public Works. But, after several hours' poring over these documents, I am constrained to confess, that I can make little or nothing of them. For example, they talk about importations of copper ore from Peru, but say nothing about imports from other countries, though they have certainly been made; and they give no account at all of the importation of copper, which the columns of the *Mining Journal* have more than once shown must have been very considerable. Some facts, however, may be extracted from these returns, notwithstanding their obscurity, and from them I select the following:—The number of concessions for the working of copper ore, in 1845, was 9; the number of copper mines, 61; of copper deposits, 18—making 88. In another page these are divided into two mines, or *minières*, "worked," and 86 "not worked"—a division which, I confess, I do not understand, seeing that ore was obtained in, at least, half a dozen different places. The number of workmen employed in the mines, &c., is only set down at 87. The number of establishments for treating copper ores is set down at three in activity, and two in inactivity. The quantity of copper obtained from native ore is stated to have been only 340 metrical quintals; from foreign (Peruvian ores), 1100 m. q.; sulphur, extracted from copper ores, 11,400 m. q.; sulphate of copper and iron, from the same, 100 m. q. These latter figures, by the way, have already been published in the *Mining Journal*. It appears, then, that the total production of copper by France, in 1845, was only 1440 m. q. Calculating 10 m. q. to the English ton (which, excluding fractions, is as near a calculation as can be), we arrive at the result, that France turned out only 144 tons of copper. This small figure, I apprehend, will surprise some of your readers, as I confess it surprises me; but its exactitude is unquestionable, for it is repeated more than once in the official returns. Small as it is, however, it is the largest production which France has made since the year 1831, as the following quotation will show:—Production of copper in 1831, 2298 m. q.; 1832, 1376 m. q.; 1833, 1195 m. q.; 1834, 933 m. q.; 1835, 952 m. q.; 1836, 1061 m. q.; 1837, 1129 m. q.; 1838, 715 m. q.; 1839, 905 m. q.; 1840, 1090 m. q.; 1841, 1008 m. q.; 1842, 885 m. q.; 1843, 310 m. q.; 1844, 590 m. q.; and 1845, 1440 m. q." The *Compte Rendu* does not explain the causes of the gradual decline from 1831 to 1841, nor of the still more remarkable decline in 1842 and 1843. Neither does it assign any reason for the partial increase of 1844, and the very remarkable increase of 1845—an increase which made the production of 1845 almost the double of that of the preceding year. It appears, however, to be a peculiarity of the production of copper in France, to increase suddenly in a particular year, and then to fall to its usual level. A glance at the production from 1816 to 1831 will prove this fact:—1816, 1642 met. quin.; 1817, 1560 m. q.; 1818, 1629 m. q.; 1819, 1319 m. q.; 1820, 2148 m. q.; 1821, 1478 m. q.; 1822, 1348 m. q.; 1823, 2588 m. q.; 1824, 1516 m. q.; 1825, 1465 m. q.; 1826, 1597 m. q.; 1827, 1663 m. q.; 1828, 2940 m. q.; 1829, 2400 m. q.; 1830, 2740 m. q. With these figures before them, those of your readers who are carrying on the controversy with respect to the English copper duties, and in which the French production of copper forms an important matter of calculation, must decide whether the increase in the production of 1844 and 1845 be a proof that French competition is becoming formidable to England, or is only a sudden gleam of prosperity, similar to those of 1840 and 1841, or of 1820, 1823, 1828, and 1830.

The *Compte Rendu* gives the "value" of the copper produced. The figures are somewhat remarkable. In 1845, for example, the value of the 1440 metrical quintals is put down at 98,200 fr.—whilst that of the 590 metrical quintals of 1844, is put down at 129,800 fr.; and the 310 of 1843, at 71,300 fr. The 885 met. quin. of 1842, are put down at 205,360 fr.; and the 1129 metrical quintals of 1837, at 198,512 fr. Going further back, we find that 2940 metrical quintals, in 1828, figure for 764,400 fr.—whilst 2740, in 1830, are only set down at 493,200 fr. Previous to 1828, the variations were not so striking; but the 1642 metrical quintals of 1816, are said to have represented 361,240 fr.; and the 1465, of 1825, 263,700 francs.

We have seen that there were five establishments for treating copper ore; these were the Usine de Couternon, in the department of Cote d'Or; the Fonderie d'Imphy, department of the Nievre; those of Chessy and Sainbel, in the Rhone, and Perrache, at Lyons. Of these, that of Imphy, is the most important; but the quantity of copper turned out by it, is not stated. It was at Imphy that the ores brought from Peru were smelted.

It appears, that the frauds committed, with respect to the coal contracts, were of a two-fold nature—a fraud on the Board of Customs, and a fraud on the Marine Department. Coal, destined for the Government vessels, is allowed to enter free of duty. Thus, a vessel, bringing coal from England, was entered at the Custom-house, at Havre, as containing (say) 500 tons. On leaving, it was declared to contain 500 tons, when, in reality, it only contained 350; the remaining 150 were consumed at Havre, without paying duty, thereby defrauding the Board of Customs of so much. On arriving at its destination, a declaration was made that the vessel contained not 350, but 600 tons; and 600 tons were paid for by the Marine Department. One of the newspapers calculates the loss to the Finance Department at 60,000 francs; and to the Marine Department, at about 1,000,000 fr.—in all, above 42,000*l*. It is, however, stated, that 16,000*l*. have been restored by the persons committing the fraud.

We read in the usual weekly letter, from St. Dizier, dated the 23d:—"There has been no change in the prices of iron, which, however, do not appear firm; and business is transacted with difficulty. There is a great deal of *fonte blanche* to be sold, but no demands."

The Northern Railway Company is, it is said, about to construct carriages in such a manner as shall enable coal to be brought from the pits in the north of France, and delivered to the purchasers in Paris, without any unloading. This will not only enable that article to be had cheaper, but better; and it is not improbable that, in the long run, it may bring coal into general use in Paris, instead of wood.

The ironmasters really might consent to allow an alteration in the iron duties, in favour of railways at least, without any, even the slightest, injury to their interests; for the daily-increasing demand for iron would prevent any falling off in their production. It is really curious to observe to what a multitude of uses iron is now applied, for none of which was it thought of a year or two ago. It is used, for example, as a substitute for rafters of roofs, the supporters of floors, beams, columns, &c., in house-building. I have observed, within the last ten days, at least twenty houses in course of construction, in which iron is made to replace wood from the ground floor to the sixth story. It is, also, beginning to be used for shutters. It is already in somewhat general use for chairs and tables; and experiments are being made to ascertain if iron will not be better and cheaper than wood as frame-work for vines. If these new demands for iron occur when the price is so enormously high, would not the demands be multiplied tenfold, if a reduction were to be made? And, even supposing no reduction to be made, would not the new demands amply compensate the ironmasters for any falling off in the existing ones which might follow a reduction of the duties in favour of English and Belgian products?

The Council-General of the department of the Loire has put forward resolutions protesting against the Great Coal Company being allowed to remain as at present constituted. This is a grave proceeding, which will tell against the company—for the Council-General is a sort of local parliament, and consists of the principal and most influential inhabitants. The vote of the Council is the more important, as it was opposed by the prefect. Several muncipal councils of the Loire have also determined to call for the dissolution of the company. As a set-off, however, to all these little mortifications, the company has had the satisfaction of seeing the permanent commission, which was appointed by the Municipal Council of St. Etienne to act against it, dissolved by order of the prefect—a measure which proves, what I have all along told you, that the Government is very friendly to the company.

The proceedings of the company are becoming a mystery to me. I perceive the St. Etienne newspapers are now attacking it, *for refusing to sell coal*.—The *Journal des Chemins de Fer* mentions a fact, which is somewhat curious, as showing the great importance that it is to railways to pass through a coal district. At St. Etienne, says your contemporary, the price of coke is 22 fr. a ton, whilst at Orleans it is 51 fr.; the difference amounts to 12,000*l*. a year—or 3 per cent. of the receipts to the prejudice of the latter company.

In addition to the facts already given, with respect to the consumption of coal, it may be stated, that, within the last seven years, it has only diminished in one of the departments—that of Corsica; and the diminution there is mainly owing to the extensive fellings of timber which have taken place in its vast forests. In only one department—the Hautes Pyrenées—was no coal at all used. In the Marliham, the consumption has increased 600 per cent within the seven years; in the Vendée, it has quadrupled; it has tripled in 4 departments; doubled, or nearly so, in 28; and remained stationary in 6.

A Frenchman has, it is said, invented a steam-plough, which succeeds admirably.—*Paris, Wednesday.*

BELGIUM.—The incomplete reports which were at first given of the speeches in the Free Trade Congress, led me into the error of supposing that nothing had been said about a question which particularly affects Belgium—the heavy duties on the importation of cast-iron. I find that the president of the congress himself (an ironmaster) had the good sense and the patriotism to condemn the existing duties. His observations are worth translating:—"Six months ago (said he) I took for the text of a speech at a meeting of the Free Trade Association of Brussels, the reduction of the duty on the import of iron and cast-iron into Belgium. I demanded that the prohibitive duty of 5 fr. per 100 kils. on *fonte* should be reduced to 3 fr.; first, because this duty makes all the Belgians pay a tax of 2,000,000 fr. (80,000*l*.), which some producers, of *whom I am one*, divide among themselves. I went further, and said, that the reduction would be advantageous to the manufacturers of *fonte* and iron, and I spoke in their interest and in mine, for a part of my fortune is engaged in the manufacture of *fonte* and iron. In trying to convince them of this, I said that in selling the *fonte d'affinage* at 13 fr., we made enormous profits, which must excite the cupidity of everybody; and that, in consequence, other capitals besides ours would compete with us; and I also said, that we should make enormous profits during one year, but that afterwards we should make none at all. My friends told me that I had lost my wits; but, gentlemen, six months have passed, and what I predicted has come to pass. *Fonte* is at present at 10 fr., and is disposed of with difficulty. The reduction of the tariff would have brought the price to 11 fr. 6 months ago, but we should have sold at it the production of several years. Thanks, however, to the prohibition—new furnaces were established, and too much *fonte* was made." What a blessing would such an enlightened man as this be among those benighted creatures, the ironmasters of France—but, alas! it is to be feared, that his preaching to them would even be worse than to the Belgians!

The directors of the Hauts Fourneaux de Monceaux-sur-Sambre, advertise that they will pay the interest of 50 fr. per share, due on the 1st of October, on and after that date, at Paris and Brussels.

In 1839, some gentlemen made a demand to the Government for a concession of some coal-pits. On the 23d of September, 1847, the demands were rejected. Only eight years was taken to give an answer to a simple application. That is the way Belgian officials manage matters.

The Russian Government is having a number of locomotives constructed in this country. A few days ago four were dispatched by the establishment of Seraing to St. Petersburgh. A number of machines for steam-engines had previously been forwarded. How comes it that British manufacturers do not keep the Russian market to themselves as they used?

The Grande Montagne Company advertises for public sale a number of shares, on which the calls have not been duly paid up.

The profits for the first half-year of the Coal Company of Jolimet et Roinge sous Paturages et Wasmes have just been fixed at 14 fr. 24 c. per share of 500 fr.; but 4 fr. 24 c. are to be returned for the reserve fund.

IMPROVEMENTS IN THE PRODUCTION OF LIGHT.

Mr. George F. Wilson, of Belmont, Vauxhall, has obtained a patent for "improvements in the production of light, and in the manufacture or preparation of materials applicable thereto." Mr. Wilson's invention relates to the treatment of tallow oil, or oleic acid, which is obtained in the preparation of materials for making candles, and also from fats and oils generally. Tallow oil, or oelic acid, has not been hitherto used for burning in lamps, owing to its deposition, whilst burning, of a black matter, which in a short time extinguishes the light. Now, this invention consists in combining it with oil that has not been converted into the acid state; by which means a product suitable for burning in lamps will be obtained, and the cost of lighting by oil materially lessened.

The mode of carrying out the invention is as follows:—100 gallons of lard oil, or of castor oil of commerce (when the latter is nearly as cheap as lard oil), are boiled with 100 gallons of liquid cocoa-nut oil (but the employment of the cocoa-nut oil is not absolutely necessary), by means of free steam, admitted through a worm; during the boiling 5 lbs. of oxalic acid are thrown in, and the boiling is continued for half an hour after the addition of the acid; the material is then left to settle for about half an hour, and the condensed water is drawn off. 100 gallons of fresh water are now introduced, and the mixture is boiled by free steam for half an hour; after which the steam is shut off, and 100 gallons of tallow oil, or oleic acid, are introduced; the boiling is then continued for about five minutes, and the mixture is left to settle for six hours; at the expiration of which time it is pumped into wooden vessels to cool, and when cool it is ready for use.

It is important that the tallow oil, or oleic acid, should be freed as much as possible from the mineral acid used in the manufacture by which it is produced. The patentee states, that the best mode of effecting this is by distillation; if, therefore, the distillation of the fatty matters, after they have been converted into an acid state, has not formed a part of the process of manufacture by which the tallow oil, or oleic acid, is produced, the patentee distils the tallow oil, or oleic acid, before mixing it with the unacidified materials, and filters it to separate the stearic acid contained in it. The patentee prefers to distil the oleic acid in the manner described in the specification of a patent granted to him in connection with George Gwynne, November 16, 1843. Instead of combining expressed acid oil with unacidified oils, the combined oil may be produced, though in a very inferior manner, by only partially saponifying fatty matters, and subjecting the same to pressure: the expressed oil would be partially acidified and partially unacidified; and such would be the case with the concrete matters, which would consist of stearine and stearic acid.

The patentee states, that although he has been particular in describing the exact means which he pursues, the particular oils which he prefers to use, and the relative quantities of the different materials he employs, he does not confine himself thereto; but he claims the manufacture and use, for the purposes of light, of an oil composed of tallow oil, or oleic acid, mixed with oil not in the acid state.—*Newton's Journal.*

TELEGRAPHIC COMMUNICATION WITH FRANCE.—We understand arrangements are in progress for carrying a line of submarine telegraph from Dover to Calais—indeed, we are led to expect that, in a few weeks, all the advantages of instant intercommunication between the two countries will be in full operation.

RAILWAY CALLS.—The amount of calls falling due on the various railways, in the month of October, is 3,493,717*l*.

PARSEY'S COMPRESSED-AIR ENGINE.—We understand, that an air chamber, on Mr. Parsey's principle, constructed at Birmingham, is now in London, and will be very shortly tested. It is represented to us as an exceedingly strong piece of machinery; and we shall be anxious to learn the results of the trial.

THE ENORMOUS MASS OF COPPER.—In the Journal, a few weeks since, we announced the arrival in this country of an immense mass of copper from America, weighing 1 ton 18 cwts. 1 qr. 24 lbs.—this splendid specimen, together with many others, was offered for sale by auction yesterday, in Farringdon-street; but we regret to say that, from some cause or other, very little interest was shown in the matter—few persons being present, and the most trifling prices offered—one of great beauty, crystallised copper, for which the owner had been offered 30*l*., brought but 3*l*. 7s.; while the chief lot, the monster mass, was withdrawn at a bid of 55*l*.—the auctioneer being desired not to sell is under 130*l*. It has been customary to doubt the assertions of the Americans respecting their mineral productions; but we must admit that these specimens were of uncommon richness, and the monster, to realise all that had been said respecting it, in size and value.

THE COLLIERS' STRIKE.—After holding out for a period of nearly three months on a combined strike against the masters, the operative colliers and miners of Lanarkshire have, this week, given way, and agreed to return to their employment on the terms they had objected to; thus, they have been punishing themselves, and injuring their families for three months to no purpose: this is always the case with these unnatural strikes and combinations—we never yet knew one of them doing the slightest good to the working man. We have no detailed estimate of the loss on the strike just terminated, but, one way and another, we imagine it will amount to at least 200,000*l*.—*Scotch Reformers' Gaz.*

ACCIDENTS ON RAILWAYS.—A correspondent makes a novel suggestion for safety—namely: that a looking-glass be placed near the guard, or engineer so as to reflect the whole train, when, of course, signals from behind could be seen. We fear the locomotive would be too tremulous; and the wind, rain, and steam, too obtrusive, to allow of any very useful reflection from a glass so placed.—*Liverpool Mercury.*—[Singular as this suggestion may appear, it forms part of a series of propositions, to lessen the causes of accident, contained in a letter from Mr. Braithwaite, C.E., inserted in the *Mining Journal* of Aug. 28.]

Original Correspondence.

ADCOCK'S SPRAY PUMP.

SIR,—My attention has just been called to an article in your paper of the 25th inst., headed "Adcock's Spray Pump;" will you, Sir, kindly advise the author, whom we all know here, that it will be far more creditable to devote his time in the pursuance of his own business, than in writing wicked and malicious libels against those who have heretofore been his best friends. Be assured, Sir, whatever this writer may assert to the contrary, that the spray pump has been eminently successful; it is in daily operation at my pit at Llanhiddel, and may be seen by any one who will take the trouble to visit the place. The writer of the article professes that he has no other object than the development of truth; strange that with such an object only, he should go out of his way to insinuate against myself a total want of business-like and commercial sagacity, evidenced by that lavish expenditure of money in unprofitable objects; that he should wilfully attempt to ruin the promising prospects of an ingenious and deserving man, and censure the management of the Victoria Iron Company on grounds utterly unconnected with the spray pump, on which only his opinion is asked by the *soi-disant* "Rhondda Collier!" If, Sir, you wish your paper to hold that high position which it merits, from the ability and talent displayed in it, you will, for the future, close your columns against this anonymous calumniator, whose name here is a bye-word for scorn and contempt.—REGINALD T. BLEWITT, M.P. for Monmouth: *Sept.* 29.

RAMBLES THROUGH SOUTH WALES.

SIR,—My last letter having found insertion, I will presume to lay before your readers a rough outline of the Geology of the Flintshire Mining District. The mineral or carboniferous limestone extends from Talargoch to the Westminster Mine, magnetic south, varying in width from east to west from two to five or six miles, overlaying the primitive clay-slate to the west of it, with partial patches of the old red sandstone lying between; overlaid in places to the east by partial layers of grit; and, in others, by large and irregular deposits of chirt, which will be explained hereafter. These patches of grit and chirt are overlaid to the east by the mountain shale, which underlays the great coal-field of this district. This channel of limestone has regular cross-courses, or channels, of ground through it at intervals of from 150 or 200 fms. apart, with broken sides, varying in width from 20 to 50 fms., and, on their junction with the shale to the east, are broken for some hundreds of fathoms in width. The broken or fractured part, from some cause, is taken away, and its space filled with chirt, and with tolerably regular lodes in it, where the great mines, to the north of Mold, are found. These cross-courses run north and south, true meridian, cropping to the west on the bluestone, and to the east under the mountain shale, above described. One of these lodes, or channels, may fairly be considered the course of the Holywell stream—that being a point below any to the south, where it could discharge itself. Its course may be considered adjoining, or nearly adjoining, and parallel to, the river Allen, from Penyfeon to the Loggerheads, and even as high up the river as Maessysafn, running with the vein about six miles, and from the river obliquely, through the limestone, about six miles to Holywell. Contrary to the general rule through the district, there would appear to be in Halkin Mountain a broken channel, in an east and west direction, which communicates one, two, or more, of the eastern cross-courses to it, and forms the drainage of the Halkin and other mines to the north at 60, 70, and some 80 fms. deep. I have given myself some pains and time in collecting the information of this district, regarding the great and profitable mines, as well the poor and small ones—therefore, I assume the statement below, which I will hand you for any purpose you may think right. If you insert it, I may yet say more about the mines south from Mold; also something about Carnarvonshire, and particularly Merionethshire.

It should be observed, that the under statement is intended to show the district as a mining one, and is not intended to be taken as correct; still, I believe, as a whole, it will not be found much out of the way. The left-hand column is intended to show the distance in miles south from Talargoch Mine; the next column to the right shows capital embarked and loss; the next, the profit; and the right-hand one, the returns for 25 years.

Talargoch Mine (in full work)	Miles —	—	£100,000	£400,000
Trelogan (idle)	3	£16,900	—	160,000
Mostyn (idle)	6	16,000	—	20,000
Holoway, and small mines west of it	8	20,000	—	70,000
Milwr Mines (idle)	9	16,000	130,000	370,000
Penyrbenbias and Longley (working)	10	3,000	20,000	100,000
Halkin Mines (old company)	12	16,000	46,000	200,000
Ditto (new company)—partially working	—	15,000	1,000	40,000
Long Rake (old company)	—	6,000	—	10,000
Ditto ditto (new company)	—	10,000	—	15,000
Hendre Wood Mine (working above adit)	15	16,000	150,000	400,000
Mold Mines (idle)	18	100,000	70,000	500,000
Fronfownog (working)	—	5,000	10,000	80,000
Gwernymynydd (idle)	—	1,000	20,000	150,000
Maesysafn (working)	20	14,000	50,000	300,000
Jamaica Mine (ditto, very rich)	23	1,200	2,000	4,000
Westminster (working)	26	30,000	—	50,000
A great number of small mines	—	150,000	—	400,000
Total		£435,200	£599,000	£3,189,000

The great loss, as shown by this statement, arises from the working of small bargains, which, without exception, are ineffectually worked, and a system of trickery is practised between the working and out-adventurers. The royalty paid is said to be full one-seventh for this period; and, according to my statement, will be about 455,57*l*. = 4·19 per cent. on the capital laid out—whilst the adventurers receive 163,800*l*., amounting to only 1·5 per cent. on the capital. If the "small adventurers" were taken out of this calculation altogether, the accounts for the "large mines" would appear thus:—adventurers' profit, 285,200*l*.=4·4 per cent. per annum; and the lords', 5·6 per cent. per annum on adventurers' capital. The lords, now, in most instances, are being paid a royalty, on an average, not much above $\frac{1}{10}$th; and it might be hoped, after satisfying themselves with the correctness of the rough basis on which this statement is founded, that still further deductions would be made.—A TRAVELLER: *Coniston, Sept.* 22.

IMPROVEMENTS IN SMELTING COPPER.

SIR,—Presuming on your assurance, that any remarks of mine, elucidatory of the value of my patent for copper smelting, would be acceptable I avail myself of the opportunity of replying to your correspondent, "Observer," assuring you, at the same time, that it is not my intention to abuse your kindness by lengthy discussions. Your correspondent, "Observer," after wishing me success in my perilous undertaking, adverts to a subject which he deems of almost more importance than the one I have ostensibly made the subject of my patent—viz.: that of becoming independent of foreigners for *sulphur* for the manufacture of *soda*. Had "Observer" visited my works, he would at once have been struck with the complete adaptation of my furnaces for attaining this object; they form, in fact, sulphur chambers, and by means of them, and the entire separation of the flame from the ore, perfect command is obtained over all the gases as they pass off, either for sublimation as sulphur, or for conversion into sulphuric acid, whilst the arsenic is separated from both. This formed originally one of the chief features of my invention; but, finding that no part of the plan, unconnected with my process for copper smelting, would entitle me to claim an exclusive right, I abandoned it, otherwise than as an accessary to my copper patent, in the specification of which I simply allude to it. All that is required for acid works, in conjunction with my furnaces, are an acid chamber and concentrating apparatus. By the aid, and through the medium, of the *peroxide* of iron formed in the roasting of the ores, much of the sulphur is at once converted into sulphuric acid—the peroxide of iron thus serving the purpose of nitre in the ordinary sulphuric acid manufacture; whilst by the addition of a nitre dish in the neck of the furnace flue, the remaining sulphureous acid would be converted into sulphuric acid; these acid fumes would be precipitated in the usual way by a jet of steam, as hydrated sulphuric acid. Supposing the *copper* ores now raised and smelted in the United Kingdom to be 200,000 tons, and to contain one-sixth of sulphur (many containing nearly one-half), and that one-half of that amount could be converted into acid—then 50,000 tons of acid could be made by my process, independently of its other advantages in the reduction of copper. FREDERICK BANKART.

Clement's-lane, Lombard-street, Sept. 30.

SMELTING COPPER ORES.

SIR,—The various notices which appear in your columns bear ample evidence of the fact, that much attention and great talent are now directed to the improvement of smelting copper ores. As a chemical process, the plan adopted by Mr. Bankart is extremely beautiful; but I doubt that the

chemical nicety, requisite for a successful development of the operation on an extended scale, will be difficult to attain—that is, to determine the formation of the necessary quantity of acid, and the complete oxidation of the iron. If he can accomplish these, the plan will be perfect, with one exception—he must still allow the escape of a considerable quantity of sulphureous vapour into the atmosphere. "Observer's" remarks on the natural formation of sulphur, are good; but he is, perhaps, not aware that, in this operation, ammonia is, at the same time, generated. My aim is, in treating sulphurets, to procure sulphur and fix the ammonia. In the natural process, the ammonia was not lost—it tended to fertilise some, probably very remote, region. It may be said, that in Nature, nothing is lost or wasted. Other people may say, that what we never possessed, we cannot be said to lose; that never having obtained sulphur and ammonia in the manner proposed, we are not losing these. In reply, I say, let us try then, to gain so much—let us try to turn copper smoke into sovereigns. I once overheard a gentleman, explaining to some young ladies, in iron-works, the routine of the manufacture, until he came at last to the finished bars, when, pointing to them, he said, "And now, ladies, we send these to Liverpool, and turn them into sovereigns." The young ladies took the remark, in a literal sense, and stared with amazement. JUPITER AMMON.

Swansea, Sept. 27.

IMPROVEMENTS IN SMELTING.

SIR,—The patent process, alluded to in the letters from Mr. Howson, and "Observer," is that of J. E. D. Rodgers, "for the separation of sulphur from mineral substances," which was offered for sale, by advertisement, in the *Mining Journal*, some weeks ago. The principle of the process is very nearly, if not precisely, that suggested by "Observer," as that which is depositing sulphur in the mountains of Iceland. Steam is passed over, or through, if possible, metallic sulphurets, during calcination, either in retorts or reverberatory furnaces, by which means a more perfect separation of the sulphur is obtained than by the use of air alone. The more nearly and thoroughly the steam is brought in contact with the ore the better, as it is a process of decompositions and affinities. There are several ways of obtaining the sulphur; but, from the condensation of sulphureous acid fumes from copper or chemical works, a plan has been suggested, arising out of this patent process, which is, to employ a certain number of retorts, to generate sulphuretted hydrogen by this plan, which sulphuretted hydrogen should be conducted into the chimney of the works, where, meeting with the sulphureous acid, the two would be mutually decomposed, and sulphur and water deposited; or the meeting might be so contrived as to take place in a suitable chamber. By the free use of steam, however, in the ordinary reverberatory furnace, air being admitted at the same time, a large portion of sulphur would be deposited in the chimney, arising from the contact of the two gases, produced by the action of the steam and air respectively; and thus the quantity evolved of noxious vapour would be materially diminished, and a considerable quantity of sulphur obtained.

Sept. 29. J. P.

ACCIDENTS IN RAILWAY TRAINS.

SIR,—It is high time railway kings and princes, who have monopolized the transit of her Majesty's lieges, should be taught that they are not *irresponsible* for the lives and limbs of the passengers. On some railways (Glasgow and Greenock), the third-class passengers have *no seats whatever*, and in others, again (Hull and Selby), *no covert* from the storm—live cattle, in their transit, are better ministered to. On other railways, again (Ayr and Glasgow), even second-class passengers are *huddled together with labourers, reeking from their work, and redolent with dirt*, and with all their implements to boot—*picks, shovels, and spades*. "They manage these things better in France." Certainly, in these respects, and some others, the continental railroads are half a century in advance of us. Neglect and inattention are too apparent on some lines, as from Abingdon to Birmingham. I speak from what I do know, and have personally experienced.

The total want of any communication between individual carriages of the train and the guard, and between him and the engine-man, in the hour of danger, is an evil of the most serious magnitude, and calls trumpet-tongued for instant attention. The recent dread catastrophe on the Leeds and Manchester line, whereby two lives were sacrificed, and other individuals dangerously wounded, is a fearful testimony to the imperative necessity imposed on railway companies, to make provision forthwith for these terrible contingencies. The onset of a furious maniac had to be sustained, and the risk of being burnt to death to be endured, without the slightest available means of sounding an alarm.

I was, on one occasion, in one of two carriages which were thrown off the line near Stafford, and was dragged several miles. The concussion was painful and perilous, and might have been, but for the providence of God, as fatal as the accident near Halifax.

A communication should be established between the guard and each carriage by means of a cord, &c., and the guard again have a direct and immediate intercourse with the engine-driver by sounding a *bell, or gong* (not a Porteus whistle, as has been recommended). The steam whistle should be left to its wonted exigencies; or the guard might in an instant, by means of a small Smee's battery, explode a cartridge of gunpowder in the locomotive, as the note of alarm to stop the train. I would impose a heavy penalty on the stoppage of the train on any frivolous pretence, or the unnecessary alarm of mere nervous excitement. J. MURRAY.

Portland-place, Hull, Sept. 25.

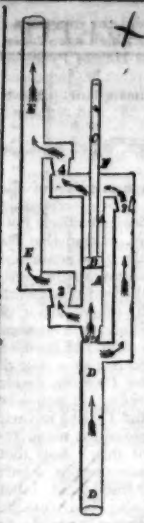
RAILWAY SIGNALS ON THE AUSTRIAN LINES.

SIR,—The inefficient means of communication between each guard and the engine-drivers on our railways is, certainly, a matter of consideration; but the cords, bells, and bell-ropes, proposed by the editor of the *Times*, and supported by many of their correspondents, are no less complicated than absurd. Every practical person will be well aware, that the slightest jerk or bunt of the train, and even the common motion of the carriages, would keep the bells constantly ringing. How, then, would the guard or engine-driver be able to know whether it was the motion of the train which agitated the bells, or the passengers? Bells and bell-pulls are all very well for drawing-rooms and stationary purposes, but the fixing of bells to act properly in a moving train would be a work of no ordinary difficulty. The use of fire-arms has, also, been proposed for the purpose—but which suggestion, I should imagine, originated with a Frenchman, as their inventions are seldom considered perfect, unless fire-arms are, in some way, attached. I certainly consider the galvanic battery, and all such playthings as bells, &c., which have been proposed by different persons, to be uncalled for, and quite useless. Perhaps, Mr. Editor, you will permit me to lay before your readers the means of communication resorted to on the Austrian railways; and I assure you, that an accident on their lines is a rare occurrence indeed. The seat of a first guard is generally seen on the first carriage, with his face towards the train, and also another guard near the end, with intermediate guards, according to the length of the train, and breakage required for the stoppages. Each guard is provided with what is called in German "a jager-horn" (huntsman's horn). The horn is so made, that a mere boy may blow a loud and shrill blast; and at every station the well-known signal is given from the last guard, through all the intermediate ones, notifying that the passengers are all in the carriages, and the doors closed; the engine-driver then receives his signal from the first guard (who is responsible for the other signals) to proceed on his journey. The sound or signal of the horn can be heard from the end of the train to the engine-driver almost instantaneously. The horn is continually slung at the side of the guard—in fact, he never appears on duty without this portion of his equipment. In case of an accident or defect, the first guard, who is aware of it, blows his horn, being the understood signal for all the other guards to do the same, who keep blowing until the engine stops; and I need scarcely assure you that, by these means, the engine-driver is not long in obeying the summons. Then, why not adopt the same means on our railways? I consider the guards on our trains, as at present appointed, in case of an accident, quite useless, as we not unfrequently see the first guard from five to six carriages distant from the engine-driver.

I think our directors should ponder well over the Austrian method of signallizing; because it is not a mere proposal, but is, and has been for some time, in extensive use, and is in every way proved to be effectual. But, if it is considered absolutely necessary to have a separate signal for the use of the passengers, why not place a gong on the top of each carriage, with a suitable striking hammer—a cord, or bell-pull, from which, into each apartment of the carriages, could be easily arranged. The sound, certainly, would attract the attention of the guard, who would then blow his horn, and the engine-driver would be instantly apprised of any danger.

Being long employed on the Austrian railways, I have frequently travelled over most of the lines, and can bear testimony to the general excellence of their appointments and management; and would readily forward a detailed statement of their system to any parties on application, but which, I fear, would not possess sufficient general interest for your columns.—G. SHEPHERD, C.E.: *Fleet-street, London, Sept.* 29.

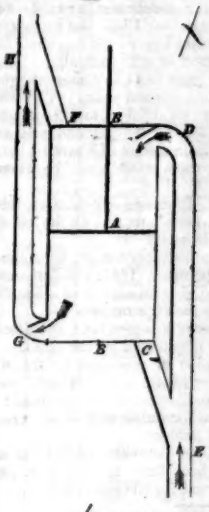
DOUBLE-ACTION PUMP.



SIR,—I beg to hand you the enclosed sketch of a double action pump, to make known to your correspondent, and which, I think, will answer his purpose: pumps of this description are numerous in this part, and work very well if they are rightly made—therefore, let A, represent the working-barrel; B, the plunger; C, the plunger-rod, working through a stuffing box at F; D, D, the pipe which goes to the well; and E, E, the discharging pipe. No. 1, 2, 3, 4, are valves, or clacks; so, suppose the plunger to be at the bottom, and in going up opens the valve, No. 1, the water then fills the barrel under the plunger; when at the top of the stroke the valve No. 1 closes; and, in coming down, opens No. 2 valve; and 3, the latter valve, the water is forced through into the pipe, E, and, at the same time, the water is coming through valve 2, and fills the barrel at the top side of the plunger—so, when the plunger is going up, it forces the water through the valve 4, and so on infinitum. THOMAS ELLIOTT.

Stockton-on-Tees, September 27.

SINGLE-BARREL DOUBLE-ACTION PUMP.



SIR,—As you do not appear to be acquainted with the manner of working a single-barrel pump with double action, and as it may be equally new to many of your readers, I annex a sketch of one which I am surprised never to have seen in operation—as so far from there being any loss of power, there would seem, theoretically, to be a saving. A, is a piston, supposed to be descending in the working barrel, B, B, necessarily closing the valve, C, and opening the valve, D, in the suction-pipe, E, causing the water to rise into the upper part of the working barrel, and closing the valve, F, and opening the valve, G, through which the water below the piston is discharged into the pipe, H—the up-stroke closing the valves, D and G, and opening the valve, F, through which the water above the piston is now discharged, filling, at the same time, the lower part of the working barrel through the valve, C.

I hope that some of your numerous readers may give Mr. Bradbury the information he requires. W. H. CASTLE.

Ulverstone, Sept. 27.

DOUBLE-ACTION PUMP.

SIR,—In reply to the letter of Mr. W. Bradbury, inserted in your Journal of the 25th inst., I beg to state, that by placing a working barrel in the position usually occupied by the top clack piece, in the ordinary plunger lift, and causing a bucket to work therein simultaneously with the plunger (by connecting them with the same rod), it is thereby rendered an efficient and economical double-acting pump. The cylinder and valve arrangement of the double-acting steam-engine, as usually constructed by the Cornish engineers (that is, with four conical valves), would constitute a very efficient double-acting pump—the eduction and induction passages and valves being made of an area to correspond with the area and velocity of the piston.—GEORGE BENNETT: *Ashburton, Sept.* 29.

RAILWAY IMPROVEMENTS.

SIR,—Permit me to offer to the notice of your scientific readers my invention of a new principle for railway rails:—

It is customary, I believe, to turn the rail, now in use, when the top is worn away, and place the bottom upwards; when that is worn away, likewise, the rail is useless for the purpose. I propose to make a rail in two parts, A, B—the part, B, to be permanent; A, moveable top, to slide in groove, C, and be replaced when worn away, which, weighing not more than one-fifth of the whole, would effect an important saving in the outlay of rails; and, from the facility of replacing, when worn out, a better line of rails would, at all times, be secured to the public. JOSEPH WILLIAM LEA.

Ashtead-row, Birmingham, Sept. 24.

RAILWAY SIGNALS.—A letter appeared in the *Times*, on Wednesday, signed "P. L.," on the means of communication between the engine driver and guard; the writer says:—"Let a cord, as soon as all the carriages are attached, be stretched from one end of the train to the other, each extremity terminating with an alarm or bell movement, placed near the guard and engine-driver; this rope must pass along the top of the carriages, resting on moveable supports somewhat resembling the letter K, which would be drawn at right angles to the line of the train by means of small cords attached to the movements, passing round pulleys to the interior of the carriages, and terminating with tassels. If an accident occur, and one of the cords be pulled, the K movement would draw the rope sideways, and thus, by shortening the line parallel to the train, ring the bells; these must be provided with springs to draw the movements into their original position. If a carriage be detached, it will be merely necessary to lift the cord out of the support placed on that carriage, and tighten the rope to the length of the train, allowance being made for the stretch of springs of the hooks which connect the carriages. A notice exacting a fine if the bell be rung, except in cases of emergency, would prevent any unnecessary stoppage of the train."

TUNNEL UNDER OFEN FORTRESS.—A few weeks ago, an article appeared in the *Mining Journal*, on the Pesth and Ofen Suspension Bridge, in Hungary; in addition to this great work, we may add, that, in consequence of the great height of the fortress (Festung) of Ofen above the level of the Danube, and the difficulty of access to the town from the new suspension bridge, a tunnel is projected under the fortification of Ofen, on a line and level with the suspension bridge. A large shaft is to be sunk, in the centre of the town, the depth of 200 feet (which is the height of the town above the river) to the tunnel, in which a grand staircase is to be constructed, for the accommodation of foot passengers. The length of the tunnel will be about 350 yards—which will form a straight line from Pesth, under the Festung, to Christian Stadt. When the tunnel and bridge are completed, a saving of a distance of nearly three miles will be effected. The cost of the tunnel and shaft will be about 19,000*l*. A project for a new canal has also been submitted to W. T. Clark, Esq., C.E., for his consideration, by the influential inhabitants of Pesth, for the purpose of uniting the Danube, at Pesth, with the Theiss river, at Segedin, by means of a navigable canal—by which easy communication would be formed between the richest and most fertile part of Hungary, which is at present uncultivated, and almost uninhabited. Whether Mr. Clark will propose a railroad, instead of a canal, is not yet known—borings, and other surveys, have been made by him. The cost of the canal has been estimated at 100,000*l*. Hungary will one day rank with other commercial nations: she has every requisite material in mines and minerals, and only requires the means of communication, and energy.

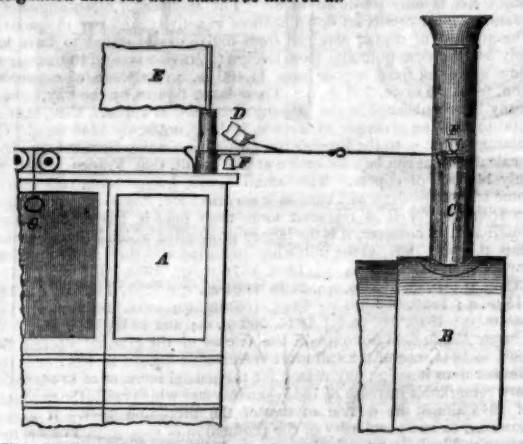
THE GATESHEAD LOCOMOTIVE MANUFACTORY.—The largest locomotive engine yet manufactured by Messrs. Coulthard and Co., of Oakwellgate, Gateshead, was completed this week, and placed on the line of the York and Newcastle Company, for whom it was built. It is "No. 156," a number which affords an indication of the vastness of the company's "plant." The new engine is one of which Gateshead and its builders may be proud.—*Gateshead Observer.*

ARRIVAL FROM CHILI.—The barque *Cuba*, Smith, master, arrived at Swansea, on Thursday evening, from Chili, with 520 tons of copper ore, a quantity of silver in bars, and two Lamas, all the produce of that country.

KOEPP'S CARRIAGE TELEGRAPH.

[Protected by registration, under Act 6 and 7 Vic., cap. 65, by E. F. L. KOEPP, of High Holborn.]

In these days of universal locomotion no one can fail to be interested in any invention, or design, that shall render more remote the loss of human life, in case of the recurrence of those accidents, to which all present modes of travelling are so liable. The invention of Mr. Koepp is intended to remedy one great defect, or at least, serious evil, attending railway transit—the difficulty, not to say impossibility, of communicating notice of any mishap which may occur in the carriages, or that may be foreseen by the passengers, to the guards, or conductors, in time to be of actual benefit; neither is there any efficient method by which the guard, or conductor, will be enabled to signalise the engine-driver with ease and certainty when necessary. To lessen the chance of destruction to life, is by no means the extent of the benefits conferred by Mr. Koepp's invention: it will do good service should such villany recur as violent assaults upon females, or whenever decent people may involuntarily be consorted with madmen, drunken or disorderly persons, &c., all which must at present be borne with patient resignation until the next station be arrived at.



This carriage telegraph, shown in the diagram, is composed of a tube, C, having a spiral spring, arranged in the lower part thereof, and upon this is placed a staff (prevented from being pushed out of the tube more than a certain distance, by a pin passing through it and a slot made in the staff), to which a small flag-staff, with flag, is screwed. When not in action, the staff, &c., remains shut up in the tube, by means of a hinged cap, carrying an inverted bell, F—the upward pressure of the spiral spring being counterbalanced by the downward pressure of a spring catch on the top of the hinged cap; which spring catch has a bell-wire, or other connector, attached to it, passing therefrom to the guard or conductor, at D, and thence over pulleys, on the top of the carriage, having a shorter wire fixed at right angles, pendant inside the carriage, A, with handle, G, attached. When travelling in the dark, a lamp is to be screwed on to the staff, in place of the flag-staff and flag, E. This apparatus being fixed to the engine, B (as shown by C, F), and the wire, or other connector, passing thence to the nearest guard or conductor (as D), at the side of whom is fixed in the carriage another telegraph, E, F, from which passes another wire, or connector, with short wire and handle, G, pendant inside the carriage, A. It is evident that, should any accident occur in the carriage, A, or should the passengers therein foresee any accident, they can, by making use of the handle, G, as they would a bell-handle, draw back the spring catch, when, the counterbalance being removed, the hinged cap falls back, the spiral spring inside the tube forces up the staff, &c. (as shown at F), ringing the hitherto inverted bell, F—thus signalising the guard or conductor that something is amiss; and, thereupon, he can, by catching at the handle, as at D, act in a similar manner upon the carriage telegraph, C, F, affixed to the engine, B, and signalise the engine-driver to stop the train. This apparatus can be applied throughout a whole train, having one telegraph attached to each carriage at a point, near the guard's seat—the wires being made in suitable lengths, and connected together by a simple fastening. It may be remarked, that, when applied to a whole train, the particular carriage signalising may be known, by being the last carriage with the flag up.

It must be obvious, from a consideration of this design, that it provides a ready means of signalising between the passengers and guards, and the guard and engineer, and cannot fail to awaken attention, as it appeals to the sense of seeing, by suddenly presenting a flag or lamp, and to that of hearing, by ringing a bell. It will not be out of place to remark here, that this invention has been submitted to several railway companies, none of which started any better objection than this—"that, if adopted, they would never get to the end of their journey, in consequence of the repeated improper use of the apparatus by foolish passengers." But any reasonable person will see that this is not a sound objection, as it could be easily removed by the railway bye-laws attaching a penalty to the unnecessary use of the carriage telegraph by any of the passengers of a train.

Patent-office and Designs Registry, 210, *Strand, Sept.* 29.

HELY'S LIFE RAFT; OR, "CATAMARAN."

[Protected by registration, under Act 6 and 7 Vic., cap. 65, by A. A. DE REGINALD HELY, of Manchester-buildings, City of Westminster.]

The invention of Mr. Koepp, above described, has for its object the increase of safety in travelling by railway; and the present one of Mr. Hely's bids fair to render as remote as may be the destruction of life, so frequently consequent upon shipwrecks, or foundering at sea. It presents an ever-accessible means of escape to the luckless mariner and traveller by sea, and is withal so simple, probable, and inexpensive, that there can be no reasonable objection to its universal adoption. It consists not in providing hollow tubes or vessels to be inflated with the air, nor in corks, but in the simple plan of having a flexible water-proof cylinder closed at one end by a lashing, the other end of which is to be closed, when charged. In the hour of need, this cylinder is charged with a seaman or passenger's hammock, mattrass, clothes, provisions, or any other substance, ready to hand, of less specific gravity than the water; and, when thus filled, will float a considerable weight. Thirty of those cylinders, together with 15 of small size—the former containing the hammocks, mattrasses, &c., and the latter the clothes, provisions, &c.—lashed together by means of four spars or oars, and 16 studding-sail booms or capstan bars, may be got ready in a few minutes for sending overboard, and form a capacious and substantial life raft, or float, which no wave can swamp, rock break, or squall upset; drawing scarcely any water, and able to sail in the wind's eye, like a "catamaran" (from whence it derives its name), well known to all navigators of the South American seas. Independently of the important advantages of simplicity, and economy of construction, which the flexible floating cylinder possesses over life-preservers and life-boats, it particularly distinguishes itself from the former, by being based on the principle of displacement of the water, and not on that of inflation with air, which is attended with considerable inconvenience and danger; and from the latter, as it occupies no stowage room, and causes no lumber on deck—an evil at all times, and under all circumstances, most desirable to be avoided on board ship. And further, in the novelty and feasibility of converting articles of food, clothing, &c., into a ready and safe vehicle for preservation from shipwreck—thus affording means of sustenance and shelter in those contingencies. It may be interesting to the readers of the *Mining Journal* to know, that this invention, or design, was tried the other day at Woolwich, in presence of Sir Gordon Bremer, K.C.B. and G.C.H., when a "catamaran," composed of 30 of these cylinders and respective lashings, that weighed only 85 lbs., and were brought to Woolwich, stowed in a small cask, was launched on the river with a crew of 30 men, which she sustained in gallant style, and entirely to the satisfaction of Commodore Bremer and the officers of the Dockyards. The contents of the cylinders, after the trial, were found as dry as when put into them. Altogether, the result of the trial was most satisfactory, and sufficient to warrant the immediate adoption of Mr. Hely's plan by the Admiralty.

Patent-office, 210, Strand, Sept. 29.

TO ENGINEERS, RAILWAY, AND STEAM-BOAT COMPANIES, AND THE PROPRIETORS OF STEAM-ENGINES GENERALLY.

BENJAMIN GOODFELLOW,

THE PATENTEE OF THE COMPOUND-ACTING AND SELF-ADJUSTING

METALLIC PISTONS,

Desires to solicit the attention of the above parties to the said IMPROVEMENT—shown in the accompanying sketch—the particular advantages of which are, that they are particularly sensitive to any variation in the size of the cylinder, and will accommodate themselves to an oval, with a constant tendency to wear it cylindrical. The junk-ring, or cover, is brought down upon the bed of the piston securely and truly, leaving the packing perfectly at liberty betwixt the plates—against which the spring presses the outside rings, or casing, as well as to the surface of the cylinder—thereby preventing the escape of steam either past or into the piston; at the same time, the friction being the least possible.

Fig. 1. Fig. 5.

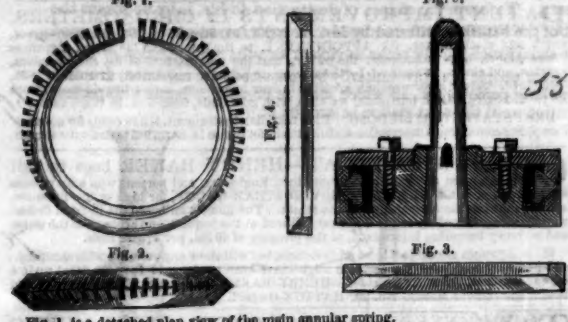


Fig. 2. Fig. 3.

Fig. 1, is a detached plan view of the main annular spring.

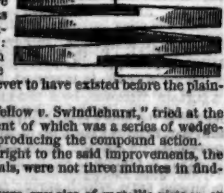
Fig. 2, a side elevation of the same, in which it will be seen that it is turned somewhat eccentric, and has a series of openings, or mortises, cut in its angular periphery, in order to assimilate all points of the spring, and impart an equal action throughout its circumference.

Figs. 3 and 4, the two outer rings, or casing.

Fig. 5, is a section taken vertically through the middle of the piston, showing the rod secured in the usual form by a cottar, or key.

As there are many, no doubt, still unacquainted with the existence of his pistons, and the same being liable to be imposed upon by parties making and vending in imitation (but with slight variation in form), he takes this opportunity of cautioning them, it being susceptible of many modifications, the simplest and most efficient of which may be seen in the subject of his patent.

The patentee has twice established his exclusive right to the principle of construction of his improved metallic pistons—once in an action, "Goodfellow v. Barker," tried on the 11th February, 1846, in the Court of Exchequer, before the Chief Baron and a special jury, when a verdict was found for the plaintiff. In this case the defendant's infringement was a helical or spiral formed spring—thus:



wround which was placed a metallic casing, to which it gave a compound, or vertical, and lateral pressure —an arrangement which was proved, in both trials, never to have existed before the plaintiff's patent.

A similar result attended a former action, "Goodfellow v. Swindlehurst," tried at the assizes at Liverpool, in March, 1845; the infringement of which was a series of wedge-form segments, acted upon by a flat spring, thereby producing the compound action.

And as a proof of the clearness of his established right to the said improvements, the juries, in both cases, after long and well-contested trials, were not three minutes in finding verdicts for the plaintiff.

B. G. begs to say, that he is prepared to manufacture any size of metallic pistons, or buckets, on the shortest notice, and has, at present, all sizes at work, up to 88 inches diameter, and air-pump buckets up to 48—specimens of which may be seen, and any particulars had, at his Works, Hyde, near Manchester. He can rebore the cylinders for the same (when required), without removing them from their places, and will guarantee that all shall be of the best material and workmanship, and engages to give every satisfaction to parties who may favour him with their orders.

The following is a list of some of the parties using the same, by which it will be seen that there are many working in Manchester, and the surrounding manufacturing districts, to all or any of which he begs to refer any of his friends:—

		Pistons.	Buckets.
ASHTON-UNDER-LYNE.			
Messrs. James Kenworthy and Brothers	manufacturers	5	3
„ Samuel Higginbottom and Sons	ditto	2	0
„ Thomas Mellor and Sons	ditto	4	1
„ John and Nathaniel Howard	ditto	1	0
„ Wright and Charlesworth	ditto	1	0
„ James Knott and Son	ditto	1	0
„ Jonah Harrop and Co., Bardsley Colliery		1	0
„ W. H. Sutcliffe and Co., West Mill	manufacturers	1	0
„ John Kenworthy and Brothers, Heys Colliery		0	1
„ John Whittaker and Sons, Hurst	manufacturers	2	2
„ Thomas Nield and Son	ditto	2	0
Mr. John Stanley, sen.	ditto	3	3
„ James S. Buckley, Ryecroft	ditto	6	6
„ James Andrew	ditto	1	0
„ James Chapman	ditto	1	1
ACCRINGTON.			
Messrs. Simpson, Langdon, and Young, calico printers, Fox Hill Bank		2	1
„ Hargreaves, Brothers, and Co.	manufacturers	5	0
„ B. and R. Walmsley, Moscow Mills	ditto	4	3
„ Hindle, Enfield	ditto	1	1
„ Fish and Bullough, Fox Hill Bank	ditto	2	2
Mr. John Westwall, Whitcash	ditto	1	0
„ John Walmsley	ditto	1	0
BACUP.			
Messrs. Hamilton and Sleath	ditto	1	0
BELFAST.			
Messrs. S. K. Mulholland and Hind	ditto	2	0
BINGLEY.			
Mr. John Smith, paper manufacturer, Horton Mills		1	1
BLACKBURN.			
Sir William Fielden and Sons	manufacturers	5	5
Messrs. William and Thomas Turner	ditto	1	0
„ William Henry Hornby and Co.	ditto	5	0
„ William Townley and Co.	ditto	1	1
„ William Eccles and Co.	ditto	5	5
„ Thomas and Richard Eccles, Darwen	ditto	3	2
„ Robert Hopwood and Son	ditto	6	6
„ Livsey and Rodgett	ditto	2	5
„ Hall and Bolton	ditto	1	0
„ Lund and Nephew	ditto	1	1
„ Pilkington, Brothers, and Co.	ditto	5	3
„ John Turner and Co., Ewood Mill	ditto	3	3
„ Eccles, Shorrock, and Co., Darwen	ditto	5	5
„ Hodgetts and Sparrows	ditto	1	0
„ Walsh and Brothers, Darwen	ditto	1	1
„ C. Potter and Co.	paper	1	0
„ Reddish and Co.	ditto	1	0
„ Thomas Birtwistle and Co., Great Harwood	ditto	1	1
„ William Folding and Brothers	ditto	1	0
„ James Forrest and Co., Navigation Mills	ditto	0	2
„ Thwaites and Ashburn	ditto	2	2
Mr. Joseph Eccles	ditto	7	4
„ Charles Edmonstone, Darwen Paper Works		4	0
„ Lawrence Charnley	manufacturer	1	0
„ John Fish	ditto	1	0
„ Walter Bulcock, Cabin End	ditto	1	0
„ Samuel Hibbert	ditto	2	2
„ Henry Sharples	ditto	1	1
„ William Dickinson, machine maker		3	2
„ William Crankshaw, Meller Brook	manufacturer	1	0
„ Lawrence Catterall, Great Harwood	ditto	1	0
„ John Shorrock	ditto	1	1
„ G. H. Openshaw, Darwen	ditto	1	0
The Throstle Nest Mill Company	manufacturers	2	3
BOLLINGTON.			
Messrs. Samuel Greg and Co.	ditto	2	0
„ Swindells, Brooks, and Swindells	ditto	2	0
BOLTON.			
Messrs. Robert Knowles and Sons	ditto	1	1
„ Henry and Edmund Ashworth, Turton	ditto	2	2
„ J. and T. B. Crompton, paper manufacturers, Farnworth		1	0
„ Ormerod and Hardcastle	manufacturers	1	1
„ John Prestwich and Son, Farnworth	ditto	1	0
„ Thomas Barrett and Son, Prestolee	ditto	1	0
Mr. Thomas Cullin	ditto	1	0
„ John Brooks, flax-spinner		3	0
„ William Ryder, roller and spindle-maker		1	0
„ John Atkinson, jun., Albion Foundry		1	0
„ John Thompson, Kearsley Mill		2	0
„ John Healey, spindle and fly-maker		1	0
„ Hugh Seed, Breightmet		1	0
„ John Evans, railway contractor		4	0
BRADFORD.			
Messrs. Christopher Waud and Co.	manufacturers	1	0
„ George Townend and Brothers, Cullingworth Mill		3	0
Mr. William Greenwood, jun., Oxenhope	manufacturer	1	1
BURY.			
Messrs. Walker and Lomax	manufacturers	2	0
„ William Grant and Brothers, Ramsbottom, calico printers		1	1
„ Greig, Watson, and Greig, Stubbins, calico printers		2	0
„ George Fletcher and Co., Unsworth	manufacturer	1	1
„ Samuel Greg and Co., Hudcar Mills	ditto	0	1
„ James Wrigley and Sons, Heap Bridge	ditto	3	0
Mr. Jonathan Openshaw, Elton	manufacturer	1	0
BURNLEY.			
Messrs. Spencer and Moore	manufacturers	1	0
„ Henry Knowles and Son	ditto	1	0
„ John and George Holgate	ditto	0	2
„ John Dugdale and Brothers, Lower House	ditto	0	1
„ Butterworth and Brooks, Sunnyside	ditto	1	0
CHORLEY.			
Messrs. Richard Smethurst and Co.	manufacturers	1	0
CLITHEROE.			
Messrs. Mercers and Anderson, cotton spinners		1	0
„ B. Bulcock and Sons	manufacturers	1	0
„ Thompson, Brothers, and Sons, calico printers		1	1
DUBLIN.			
Messrs. Pim, Brothers, and Co.	manufacturers	2	0
DUKINFIELD.			
Messrs. Hyde, Sons, and Sowerby	ditto	5	5
„ Hindley and Sutcliffe	ditto	1	2
„ Robert Lees and Sons	ditto	2	2
„ Binns, Dean, and Co.	ditto	2	0
„ James Ogden and Sons, spindle-makers, &c.		2	0
„ Thomas Heyle and Sons, calico printers		0	1
Mr. Joel Goe	manufacturer	1	0
„ Mr. Samuel Robinson	ditto	2	1
The Dunkirk Coal Company		0	1
The Dukinfield Coal Company		1	0
DUNCHURCH.			
Mr. H. L. Sutton, corn miller		2	0
FAIRFIELD.			
Messrs. Worthington and Benson	manufacturers	1	0
„ W. M. Christy and Sons	ditto	2	2
„ Henry Lees and Brothers, Droylsden	ditto	2	0
Mr. John Ashbury, Openshaw		1	0
GLOSSOP.			
Messrs. John and Joseph Bennett	manufacturers	1	0
„ E. Potter and Co., calico printers, Dinting Vale		2	0
Mr. Samuel Olliver, Dinting Paper Works		1	0
„ Samuel Shepley, Brookfield Mill	manufacturer	1	1
„ Joseph Howard, Primrose Mill	ditto	1	0
HYDE.			
Messrs. Thomas Ashton and Sons	ditto	11	10
„ Charles and Thomas Howard	ditto	1	0
„ John and Thomas Thornley	ditto	5	2
„ William Sidebotham and Co., Gibraltar	ditto	1	0
„ James Ashton and Brothers, Woodley	ditto	6	0
„ Samuel Hibbert and Co.	ditto	1	0
„ H. Ryding and Sons, joiners and cabinet-makers		1	0
Mr. John Wharmby	manufacturer	1	0
„ John Sidebotham	ditto	1	0
The Trustees of the late J. Horsfield	ditto	4	0
Messrs. Randal, Hibbert and Sons, Godley	ditto	3	1
Mr. Alexander Wylde Thornely, Godley	ditto	4	3
„ John Turner, Godley	ditto	5	2
Messrs. James Marler and Brothers, Newton Moor	ditto	3	3
HALIFAX.			
Messrs. James Akroyd and Sons	ditto	2	0
„ Crossley and Sons	ditto	1	0
„ Robert Whitworth and Co.	ditto	1	0
„ William Appleyard and Son, Ovenden	ditto	1	0
Mr. John Bould, Ovenden	ditto	1	0
„ Henry Ambler	ditto	2	0
„ James Dewhurst	ditto	1	0
HAUGHTON.			
Mr. Thomas Shaw, Haughton Colliery		2	0
HAYFIELD.			
Messrs. Hibberts and Alcock	manufacturers	2	2
HAZEL GROVE.			
Messrs. John Cooper and Co., Bosden Mill	ditto	1	1
HEBDEN BRIDGE.			
Messrs. John Crossley and Sons	ditto	1	0
HEYWOOD.			
Messrs. Butcher and Hodgkinson	manufacturers	1	0
„ James Kershaw and Sons	ditto	2	0
„ J. and J. Harrison and Co.	ditto	1	2
„ John Wilde and Son	ditto	1	0
„ Fenton, Schofield, and Co., Hooley Bridge Mill	ditto	2	0
Mr. Richard Kay	manufacturer	2	1
„ David Mills	ditto	1	0
„ John Hargreaves	ditto	1	0
„ Richard Burch	ditto	1	0
HUDDERSFIELD.			
Messrs. Berry and Crowther, Lockwood	manufacturers	1	0
HULL.			
The Hull Flax and Cotton Mill Company		5	5
IPSWICH.			
Messrs. Ransome and May		2	0
LANCASTER.			
Messrs. John Greg and Co.	manufacturers	5	0
„ Satterthwaite and Barrow	ditto	0	1
„ Rossall and Charnley, ironfounders		1	0
„ W. Thompson and Co., Caton	manufacturers	1	0
Mr. William Jackson	ditto	1	0
LEEDS.			
Messrs. Ripley and Ogle	woollen	ditto	2 2
„ Marshall and Co.	ditto	ditto	4 0
„ William Atkinson and Sons, Cleckheaton		ditto	2 0
„ Macles and March, Union Foundry			1 1
„ Wilkinson and Co., flax spinners			1 0
„ Briggs, and Co., flax spinners			1 0
„ George Rhodes and Son, Ings Mill, Heckmondwike			1 0
Mr. William Lister, card manufacturer, Birstal			1 0
„ Samuel Cooke, Mill Bridge	manufacturer		1 0
LEIGH.			
Messrs. James Burton, Chippendale, and Co., Tyldesley			2 0
„ Jackson, Bailey, and Knott	manufacturers		1 1
„ Robert, Henry, and John Arrowsmith, Astley			0 1
LITTLEBOROUGH.			
Messrs. Joseph and Benjamin Schofield	manufacturers		2 0
„ James Bamford and Co.	ditto		1 0
Mr. James Kershaw	manufacturer		1 0
„ John Travis, Shaw Clough	ditto		1 0
LONDON.			
The British Government			17 7
Mr. Charles de Bergue			1 0
LONDONDERRY.			
Mr. David Munn			1 0
LIVERPOOL.			
The North Shore Mills Spinning Company			2 3
MANCHESTER.			
The Oxford Road Twist Company			5 0
The Dacca Twist Company			1 0
Messrs. Kelly and Gilmour	manufacturers		2 2
„ Henry Waterhouse and Co.	ditto		2 0
„ Wood and Westheads	ditto		1 1
„ Parnell and Thompson, Jersey-street and Hulme	ditto		3 0
„ Thomas Dogshon and Nephews	ditto		2 0
„ Thomas Hoyle and Sons, Mayfield Print Works			2 0
„ John Thompson and Co., Salford	manufacturers		2 0
„ Harvey, Tysoes, and Co.	ditto		1 0
„ Roberts, Fothergill, and Dobinson, engineers			1 0
„ Woodiwis and Ashworth, calenderers			1 0
„ John and Samuel Barratt, corn factors			1 0
„ Gardiner and Bazley	manufacturers		3 2
„ George Wooley and Son	ditto		1 1
„ Thomas and Robert Barns	ditto		1 1
„ Simpson, Thompson, and Co., Crumpsal Mill			4 3
„ James Holdsworth and Co.	silk manufacturers		1 0
„ J. and J. L. Gray	ditto		1 0
„ John Leeming and Co.	ditto		1 0
„ Collier and Plythian	ditto		1 0
„ M'Connel and Co.	ditto		1 0
Mr. Charles Pooley	ditto		5 1
„ G. R. Chappell, Holt Town	ditto		1 0
„ James Guest, Holt Town Mills	ditto		6 1
„ James Waddington	ditto		1 0
„ Thomas Houldsworth	ditto		2 1
„ Thomas Crompton	silk	ditto	1 0
Messrs. Horsfall and Co.	ditto		3 1
„ John Rylands and Sons, Gorton Mills	ditto		3 0
„ Joseph Thompson and Sons, Pin Mill	ditto		1 1
Mr. Joseph Hulme, engineer			1 0
„ Richard Gould, calenderer			1 1
Messrs. Ralph Waller and Co.			1 1
„ Nicholls and Ashton	manufacturers		1 0
„ Parr, Curtis, and Madely			0 1
Mr. James Poillitt, calenderer			1 0
Messrs. Gray, Bullock, and Gray			1 0
Mr. George Robinson			1 0
„ Joseph Lamb, spindle and fly manufacturer			1 0
The Trustees of Sutcliffe and Oxley			1 0
The Executors of the late James Massey and Son, Gaythorn			1 0
MACCLESFIELD.			
Messrs. James Smith and Sons, Sutton	manufacturers		1 0
„ Jeremiah Clarke and Sons	ditto		1 0
„ Henry and Thomas Wardle	ditto		1 0
„ Samuel Bayley and Co., Lower Hayse Mill			0 1
The Executors of the late Richard Gaunt			1 0
MOSSLEY.			
Messrs. Charles Kershaw and Sons	manufacturers		1 1
„ N. Buckley and Sons, Carr-hill Mill	ditto		3 2
„ Giles and Mark Andrew	ditto		1 1
MOTTRAM.			
Mr. Thomas Rhodes, Hollingworth	ditto		1 0
„ Ralph Sidebottom, Mill Brook	ditto		2 0
Messrs. John and William Sidebottom and Co.	ditto		3 1
„ George and Joe Sidebottom	ditto		1 1
John Chapman, Esq.			1 0
NEWTON HEATH.			
Mr. James Newton, Failsworth	manufacturer		1 0
„ Charles Carr	ditto		1 1
OLDHAM.			
Messrs. Samuel Radcliffe and Sons	manufacturers		3 0
„ James Lees, Son and Co., Waldshaw Mills	ditto		3 3
„ Collinge and Lancashire	ditto		4 2
„ Moss and Howard, Mill Bottom	ditto		1 0
„ William Hegginbottom and Co., Greenacres Moor			1 0
„ Ogden and Seville, Hey Chapel	manufacturers		1 0
„ Lees and Bailey, Bank Top, Lees	ditto		1 0
„ John Waring and Sons, Mill Bottom	ditto		1 0
„ William Jones and Co., coal merchants			3 1
„ John Worthington and Sons	manufacturers		3 2
„ John Bridcoake and Brothers, Waterhead Mills	ditto		2 0
„ Lees and Mills	ditto		1 0
„ Elkanah Moss and Brothers	ditto		1 0
„ Schofield and Fielding, Lees	ditto		1 0
Mr. James Cheetham, Greenacres Moor	manufacturer		3 2
„ Daniel Dronsfield, Werneth	ditto		2 0
„ John Birch, Lees Hall	ditto		1 0
Messrs. Tattersall and Mellor	ditto		2 0
Mr. Lawrence Law, Lees	ditto		1 0
„ James Lees, Greenbank Mill	ditto		2 0
Messrs. J. and J. Lees, Clarke's Field Mill	ditto		2 0
Mr. James Greaves, Derker Mill	ditto		1 1
„ George Ormrod	ditto		1 0
„ William Henry Fletcher	ditto		1 0
„ George Emmott, Albion Mill	ditto		1 0
„ John Lees, Primrose Mill	ditto		1 1
„ Sharples	ditto		1 0
„ John Bins, Hey Chapel	ditto		1 0
„ John Hall, Mill Bottom	ditto		1 0
„ Thomas Proctor, Shaw	ditto		1 0
„ John Lees, Mill Bottom	ditto		1 1
„ Samuel Taylor, Lees	ditto		1 0
„ John Booth, Lees	ditto		1 0
Mrs. Nanny Good, Greenacres Moor	ditto		1 0
„ Susannah Bellott, Chapel Mills	ditto		1 0
„ Betty Wrigley and Sons, Heyside	ditto		1 0
Rev. William Lees, Shore Mills, Greenacres Moor	ditto		1 0
Messrs. John and Thomas Ogden, Lees	ditto		1 1
PENDLETON.			
Messrs. Richard and Robert Bridge, Pendlebury	ditto		1 0
Mr. James Gorton, bleacher, Seedley	ditto		1 0
POYNTON.			
Lord Vernon, Coal Works			2 1
PRESTON.			
Messrs. Horrockses, Miller, and Co.	manufacturers		9 9
„ Paul Catterall, Son, and Co.	ditto		1 0
„ Thomas and William M'Guffog	ditto		1 0
„ Hincksman, Furness, and Co., flax-spinners			1 0
„ John Paley and Co.	manufacturers		4 0
„ Gardner and Naylor	ditto		1 0
„ Swainson, Birley, and Co.	ditto		1 1
„ George and John Cooper	ditto		1 1
„ Smith and Slater	ditto		1 0
„ William Bashall and Co., Farrington Mills	ditto		3 0
„ Swainson and Brothers	ditto		1 0
„ Napier and Goodair	ditto		1 0
„ E. Edge and Co.	ditto		1 0
„ Birley Brothers	ditto		1 2
„ German, Petty, and Co., flax spinners			2 2
„ Hugh and Arthur Dawson	manufacturers		1 0
Mr. Richard Bashall, Walton Factory	ditto		1 1
„ Joseph Clayton, engineer			
„ John Stevenson	ditto		1 0
„ Miles Rodgett	manufacturer		1 0
„ Joseph Gillow	ditto		1 0
„ William Calvert, Walton-le-dale	ditto		1 0
„ J. Pickless, Sovereign Mill	ditto		1 0
„ John Leigh	ditto		1 0
„ Richard Threlfall	ditto		1 0
„ Richard Riley	ditto		3 0
„ Hilton Wilson, spindle and fly maker			1 6
„ Robert Gardner	manufacturer		2 2
„ John Evans, Chipping	ditto		1 1
„ Seed	ditto		1 0
„ John Hawkins	ditto		2 0
RAWTENSTALL.			
Mr. John Robinson Kay	ditto		2 2
Messrs. G. and G. Pilkington, Crawshaw Booth	ditto		1 0
ROCHDALE.			
Messrs. Samuel Radcliffe and Sons	ditto		4 1
„ James and Joseph Bottomley	ditto		1 1
„ James Proctor and Sons	ditto		1 0
„ James King and Sons, Moss Mill	ditto		2 3
„ Jonathan Fildes and Co., Shore Mill	ditto		1 1
„ John Ashworth and Sons, machine-makers			1 0
RAILWAYS.			
Chester and Holyhead			3 0
Dublin and Drogheda			12 0
Eastern Counties			4 0
Manchester and Birmingham			60 0
Manchester, Sheffield, and Lincolnshire			70 0
ROYTON.			
Messrs. G. Earnshaw and Co., Dogford Mill	manufacturers		2 2
„ Buckley and Robinson	ditto		1 0
„ Seville, Chadwick, and Co.	ditto		0 1
RUNCORN.			
The Old Quay Company			2 2
SANDBACH.			
Messrs. G. and W. Poynton, corn millers, Lawton			1 0
SHEFFIELD.			
Messrs. Thomas Turton and Sons			1 0
„ Fisher and Bramall			1 0
„ William Jessop and Sons, Brightside			1 0
SOWELBY BRIDGE.			
Messrs. Sutcliffe Brothers	manufacturers		1 0
STALYBRIDGE.			
Messrs. Thomas Harrison and Sons	ditto		4 3
„ Benjamin Kirk and Sons	ditto		2 0
„ George Cheetham and Sons	ditto		3 5
„ William Bayley and Brothers	ditto		4 5
„ William Waring and Co.	ditto		1 0
„ Henry Johnson and Sons	ditto		1 0
„ James Bayley and Sons	ditto		1 1
„ James Hall and Sons	ditto		1 0
„ James Mills and Sons	ditto		1 0
Mr. John Leech	manufacturer		3 0
„ Robert Platt	ditto		0 2
„ John Wagstaff	ditto		1 0
SADDLEWORTH.			
Mr. Thomas Robinson			1 0
Mrs. Buckley, Sheiderslow			1 0
STOCKPORT.			
Messrs. Thomas Fernley and Son	manufacturers		2 2
„ James Marshall and Sons	ditto		4 0
„ Hole, Lingard, and Cruttenden	ditto		2 0
„ Jonathan Robinson and Brothers	ditto		3 1
„ S. and T. Carrington	hat		1 0
„ William Livsley and Co.	ditto		1 0
„ Axon and Walsh	ditto		1 0
„ Hardy and Andrews	ditto		2 2
„ T. Walmsley and Co., Sheepwash Mills	ditto		1 0
„ Frederick and George Wilkinson, Portwood	ditto		2 1
„ James Wilkinson and Son	ditto		2 0
„ John Marsland and Brothers	ditto		1 1
„ William and Cephas Howard and Co.	ditto		2 1
„ William and James Whitelegg	ditto		1 0
„ Kershaw, Leese, and Co., India Mills	ditto		4 0
„ Jesh. and Thomas Read, Heaton Norris	ditto		1 1
„ Otho Hulme and Sons, calico printers			1 1
„ William Fernley and Co., Higher Hilgate Mill			1 1
„ Thomas Walmsley and Co., Park Corn Mill			2 0
„ Crowther and Shawcross, Brinksway			1 0
„ James and Robert Gee, Edgeley Mills			2 1
Mr. Apellis Howard	manufacturer		1 0
„ Edward Hollins	ditto		3 0
„ Peter Marsland	ditto		1 0
„ Henry Pearson, Heaton Mersey	ditto		2 1
„ J. J. Moody	ditto		1 0
„ Alfred Orrell, Travis Brook Mill	ditto		5 5
„ Jesse Howard	ditto		2 3
„ Francis Smith Clayton	ditto		1 0
„ Michael Newton, Lancashire-hill Silk Mill	ditto		1 1
„ Thomas Hunt, Brinksway Mill	ditto		3 1
„ John Lees, Brinksway	ditto		2 1
„ Robert Hyde Greg	ditto		2 0
„ Charles Withington, New Bridge Lane Mill	ditto		2 0
„ John Cooper, Portwood	ditto		1 0
„ John Robinson, Portwood	ditto		2 1
Sir Ralph Pendlebury	ditto		3 0
John Brooke, Esq., Hope-hill			1 1
Mr. Thomas Wheildon, Portwood	manufacturer		1 0
„ B. W. Gabriel, Hempshaw Mill	ditto		1 1
„ William Jowett, Cheadle Corn Mills	ditto		1 1
STOCKTON-UPON-TEES.			
Messrs. Bate and Firth	ditto		2 0
„ Sampson Langdale and Son, corn merchants, Yarm			2 0
STOKE-UPON-TRENT.			
Messrs. H. and R. Heywood, Brownhills			2 0
SOUTHOLDEN.			
Messrs. Fielden, Brothers	manufacturers		1 1
„ Abraham Ormerod and Brothers	ditto		1 0
„ Richard Ingram and Sons	ditto		3 1
„ John and William Barker, Barowice Mill	ditto		2 6
„ William and Charles Chambers	ditto		3 0

[For Continuation, see following page.]

MR. GOODFELLOW'S METALLIC PISTONS.

[Advertisement continued from preceding page.]

		Pistons.	Buckets.
TODMORDEN.			
Messrs. J. and A. Stansfield	manufacturers	2	0
,, Lord Brothers, ironfounders		1	0
Mr. John Sutcliffe, Harley House	manufacturer	1	0
,, Lawrence Wilson	ditto	0	1
,, Jonathan Barker, millwright, Mill Wood		1	0
,, James Nuttall, ironfounders		2	0
ULVERSTONE.			
Mr. Philip Hartley	manufacturer	1	0
WOLVERHAMPTON.			
Mr. Barker, Chillington Iron Works		1	0
Messrs. J. and J. Norton		1	1
Lord Ward, Dudley		6	0
WARRINGTON.			
Messrs. Cook and M'Minnis	manufacturers	2	0
WIGAN.			
Messrs. Thomas Taylor and Brothers	ditto	8	0
,, James Eckersley and Sons	ditto	3	1
,, William Johnson and Co.	ditto	2	0
,, John Acton and Co.	ditto	1	0
Mr. James Gidlow, Ince	ditto	1	0
,, Joseph Rylands, Linen Mill	ditto	3	0
WILMSLOW.			
Mr. William Bower	ditto	1	0
RUSSIA.			
The Russian Cotton Spinning Company, St. Petersburg		—	
Messrs. Sanigan and Co.	ditto	—	
,, Lucene, Moscow		—	
General Maltzoff, ditto		—	
PRUSSIA.			
Messrs. C. G. Kramsta and Sons, Freyburg, Silesia		—	
GERMANY.			
The Bonn and Cologne Railway Company		—	
the Pasha of Egypt		—	

The undermentioned engineers have applied (principally to new engines) the numbers of pistons and buckets respectively placed opposite their names, and which are included in the foregoing list—

Mr. William Fairbairn, Manchester	94	25
Messrs. Sharpe Brothers and Co., Manchester	150	1
,, Richard Ormerod and Son, Manchester	6	0
,, Benjamin Hick and Son, Bolton	7	3
,, Rothwell and Co., Bolton	20	11
,, John Musgrove, Son, and Heaton, Bolton	13	4
,, Jackson and Brothers, Bolton	1	1
,, Thompson and Cole	1	1
Mr. William Yates, Blackburn	27	19
Messrs. Parkinson and Smithers	5	1
Mr. William Kay, Bury	5	3
Messrs. Richard Walker and Brother	2	0
,, Simpson, Bland, and Howarth, Bury	3	0
,, William, John, and James Garforth, Dukinfield	14	0
The Haigh Foundry Company, Wigan	7	0
Messrs. William Todd and Brothers, Rochdale	2	0
,, Charles Tayleur and Co., near Warrington	2	0
,, William Hancock and Son, Fenton, Staffordshire	2	0

ORIGINAL REGISTRY OFFICE, FOR THE SALE AND PURCHASE OF MINING SHARES.

No. 28, THREADNEEDLE-STREET, LONDON.

CROSSMAN, SOMMERS, AND CO., AGENTS.

SHARES FOR DISPOSAL. 56

Devon and Courtenay Consols	Princess Royal (St. Agnes)
East Birch Tor	Stray Park
New East Crowndale	Trelawney
East Wheal Rough Tor	South Wheal Sophia
Wheal Esan	Wheal Susan
North Wheal Camel	Victoria Tin Mining Company
Wheal Sisters	Wheal Ann (Bridford)
Great Wheal Rough Tor	Wheal Barbara

FOR PURCHASE.

West Tolgus — West Seton — Gonamena

WHEAL ANNA MARIA COPPER AND SILVER-LEAD MINE, DUNSFORD, near EXETER.

The committee of management, elected at the first general meeting of shareholders, held at Dunsford, on Saturday last, will MEET at the offices of H. W. HOOPER, Bedford Circus, Exeter, on Friday, the 8th inst., at Two o'clock P.M.

R. TRIPP, Secretary, of whom prospectuses may be had.

Offices, 12, High-street, Exeter, September 27, 1847. 57

The following is the additional mining agents' report, which was read by the secretary, at the above meeting.

WHEAL ANNA MARIA COPPER AND SILVER-LEAD MINE.

To day being the general meeting of the shareholders, we beg to lay before you a report of the proceedings and prospects of the mine.

We have sunk a shaft by the river, about 2 fathoms deep, on a lode about 5 feet big, underlaying south 6 inches in a fathom. The lode there made up with gossan, mundic, spar, and some good spots of yellow copper ore; the lode exceedingly strong, and kindly for making copper very near the surface. We have since sunk several pits through the marsh, to trace the lode from the river; and being now satisfied about the run of the lode, we have commenced the permanent or engine-shaft, where we intend to sink on the course of the lode to the depth of 10 fathoms, and then to drive east and west. In the meantime we intend to erect a horse-engine, and get a lift of 6-inch pumps, which will be sufficient power to put the shaft to the depth before named. On the south lode, we have sunk about 13 feet, close by the river side; the lode averages about 4½ feet wide, containing prian, peach, mundic, and some good stones of the black oxide of copper; this lode, underlaying north, will form a junction with Woom's lode, at the depth of 40 fathoms, provided they continue their underlay; and, from the present appearance, there can be no doubt of its making a good and permanent mine.

(Signed) HENRY JAM[illegible]
THOMAS [illegible]

Dunsford, September 25, 1847.

OFFICE FOR PATENTS, 7, STAPLE INN, HOLBORN,

J. MURDOCH (successor and late assistant to Mr. Hebert)

Informs INVENTORS and PATENTEES, that, at his OFFICE, they can obtain 58

REFERENCE TO A CLASSIFIED LIST OF PATENTS,

(THE ONLY ONE EXTANT), which shows at one view all the Patents ever granted for any particular object, whereby they may save much trouble and expense, and procure information not otherwise obtainable. BRITISH and FOREIGN PATENTS OBTAINED, and USEFUL and ORNAMENTAL DESIGNS REGISTERED.

SPECIFICATIONS carefully prepared, and REPORTS of ENROLLED SPECIFICATIONS furnished on moderate terms.

FINISHED and WORKING DRAWINGS executed with accuracy and dispatch.

NEW PATENTS.

C. Jay, gent., Bathurst-street, Hyde-park Gardens, for certain improvements in apparatus for evaporating and concentrating saccharine and saline solutions, and which may be also applicable to the evaporation and concentration of vegetable and other extracts.

T. Moore, Burnley, Lancaster, manufacturer, for improvement in looms for weaving.

W. E. Newton, Chancery-lane, civil engineer, for improvements in machinery for the manufacture of nets and netting.

E. Johnson, Manchester, for certain improvements in the manufacture of wire cloth.

C. de la Sabzese, Paris, gent., for improvements in brassing and bronzing the surface of steel, iron, zinc, lead, and tin.

R. H. Nicholls, gent., Thurlby-grange, Bourne, Lincoln, for improvements in machinery for distributing corn and other grain on land, and also improvements in giving motion to agricultural and other machinery.

Ignacio de Barros, gent., Lisbon, for improvements in machinery for making lasts for boots and shoes, butts or stocks for fire-arms, and other irregular forms. (Being a communication.)—*Mechanics' Magazine.*

COAL MARKET, LONDON.

PRICE OF COALS PER TON AT THE CLOSE OF THE MARKET.

MONDAY.—Adair's Main 16 6—Bate's West Hartley 17 6—Buddle's West Hartley 17 6—Carr's Hartley 17 6—Chester Main 16 6—Davison's West Hartley 17 6—Dipton Tanfield 15 6—Hasting's Hartley 17 6—Holywell Main 18 3—Original Tanfield 15 6—Ord's Redheugh 16 6—Tanfield Moor 18—Townley 17—West Wylam 17 6—West Hartley 17 6—Wylam 18—Wall's End Acorn Close 18—Barnard 17 6—Bewicke and Co. 17 9—Burnhope 17—Heworth 17 6—Hilda 17 6—Washington 16 6—Eden Main 20—Belmont 18 9—Crawford's 16 6—Haswell 20 6—Hetton 20—Lambton 20—Lumley 18 6—Murton 20—Russell's Hetton 20—Richmund 18—Shotton 19 6—Stewart's 20—Cassop 19 6—Hudson's Hartlepool 19—High Thornley 17—Heugh Hall 18 3—Brown's Deanery 18 6—Dennison 18 6—Gordon 16 6—South Durham 18 3—Tees 20—West Tees 17 6—West Hetton 18 3—Whitworth 15 9—Cowpen Hartley 17 6—Derwentwater Hartley 17—Howard's West Hartley Netherton 17 6.—Ships at market, 270; sold, 135; unsold, 134.

WEDNESDAY.—Adair's Main 16 6—Bate's West Hartley 17 6—Buddle's West Hartley 17 6—Burnhope Hartley 18 6—Carr's Hartley 17 6—Chester Main 16 6—Davison's West Hartley 17 6—Dipton Tanfield 15 6—Hasting's Hartley 17 6—Holywell Main 18 3—Original Tanfield 15 6—Ord's Redheugh 16 6—Tanfield Moor 18—Townley 17—West Wylam 17 6—West Hartley 17 6—Wylam 18—Acorn Close Wall's-end 17 3—Bewicke and Co. 17 6—Burnhope 17—Gosforth 17 6—Killingworth 17 6—Northumberland 17—Eidderie's 17 3—Willington 16 6—Wharncliffe 17 6—Eden Main 19—Belmont 19—Braddyll's Hetton 19 9—Crawford's 16 6—East Hetton 17 3 and 17 6—Haswell 20 3 and 20 6—Hetton 20—Lambton 19 6—Lambton 19 9—Lumley 18 9—Russell's Hetton 19 9—Richmund 18 6—Stewart's 20—Washington 16 9—Whitwell 17 9—Cassop 19 6—Hartlepool 20—Hudson's Hartlepool 19—High Thornley 16—Kelloe 19 6—Adelaide Tees 19 9—North Durham 16 3—Seymour Tees 18 9—Tees 20—West Cornforth 18—Whitworth 16—Cowpen Hartley 17 6—Derwentwater Hartley 17—Howard's West Hartley Netherton 17 6.—Ships at market, 217; sold, [illegible]

FRIDAY.—Adair's Main 16 3—Bate's West Hartley 17 6—Buddle's West Hartley 17 6—Burnhope Hartley 16 9—Davison's West Hartley 17 6—Hasting's Hartley 17 6—Holywell Main 18 6—Original Tanfield 15 6—Ord's Redheugh 16 6—South Pearoth 16 3—Tanfield Moor 18—West Wylam 17 3—Wylam 19—Wall's End Acorn Close 16—Bewicke and Co. 17 6—Burnhope 16 6—Heston 18—Hilda 17 6—Wharncliffe 18—Eden Main 19 6—Belmont 19 3—Braddyll's Hetton 20 6—Bell 19 6—Crawford 16 9—Haswell 20 6—Hetton 20 3—Lambton 20—Lumley 19—Shotton 19 9—Stewart's 20—Washington 17—Whitwell 18—Hudson's Hartlepool 19—High Thornley 16 6—Heugh Hall 18—North Tees 16 6—South Durham 17 9—Seymour Tees 19—St. Helen's Tees 17—[illegible] 20—Whitworth 16.—Ships at market, 98.

BY HER MAJESTY'S LETTERS PATENT.

FULLER AND DE BERGUE'S VULCANIZED INDIA-RUBBER BUFFERS and BEARING SPRINGS FOR RAILWAY CARRIAGES.

The PATENTEES of this NEW and IMPORTANT INVENTION beg to announce to Engineers, Carriage-builders, and Railway Companies (especially those constructing new lines), that they have now completed their arrangements for SUPPLYING the VULCANIZED INDIA-RUBBER BUFFERS and DRAW-SPRINGS, for Passenger-Carriages, Waggons, Cattle-Carriages, Engines, Tenders, &c., and are prepared to execute Orders TO ANY EXTENT. 59

On several of the principal Lines these Buffers have now been tried for many months past, under very able superintendence, and with decided success. The patentees, therefore, feel justified in stating, that they are prepared to furnish not only a more efficient Buffer than any hitherto in use, but on terms which will effect a considerable saving to Companies in the first outlay.

Specimens of the various kinds of buffers and draw-springs may be seen, and prices obtained, on application at their offices, No. 9, Arthur-street West, London-bridge, or at their depôt, No. 2, David-street, Manchester.

The patentees will also be happy to furnish full information to all communications by letter, together with drawings of the best mode of application.—The attention of Locomotive Engineers is particularly invited to their BEARING SPRINGS for ENGINES and TENDERS, the recent trials of which have proved most successful.

IMPORTANT TO RAILWAY AND STEAM NAVIGATION COMPANIES, MANUFACTURERS, AND ENGINEERS.

W. BROTHERTON AND CO.'S

PATENT LUBRICATING FLUID (or Animal Oil) FOR ALL DESCRIPTIONS OF MACHINERY. 60

W. B. & CO. have the pleasure to state, that the above article is extensively used in her Majesty's Steam Navy, and by several of the principal Steam Navigation and Railway Companies, and is pronounced by them, and by the first practical engineers of the day, to be far better adapted for the purposes of lubrication than any other article hitherto used for such purposes. The Patent Lubricating Fluid is equally applicable for the most intricate and fine pieces of machinery, as for the heaviest bearings of the steam-engine. It is cheaper, much more economical, and cleaner than oils at present in use; is free from smell, and calculated to effect a vast saving in the expenditure of working steam powers.

Further particulars can be had, and testimonials seen, by application to the manufacturers, W. BROTHERTON & CO., Hungerford Wharf, Strand, London.

N.B.—The above article will burn in lamps, and give a light equal to the best sperm oil.

IMPORTANT TO ENGINEERS, MANUFACTURERS, RAILWAY AND STEAM-BOAT COMPANIES.

Messrs. W. & C. MATHER beg to call the attention of the ABOVE PARTIES to their

IMPROVED PATENT ELASTIC METALLIC PISTONS. 61

The PRINCIPAL FEATURE and ADVANTAGE of THIS IMPROVEMENT is—

1. Its great ELASTICITY and SELF-ADJUSTING PROPERTIES, which enable it to yield to any inaccuracy of the cylinder, whether oval or taper, and to move with the least possible friction.

2. Its extreme SIMPLICITY and LIGHTNESS, consisting of only two pieces of metal, having the vertical and lateral pressure in due and proper proportion, independent of each other.

3. It takes the LEAST possible SPACE, and is well adapted for air and water-pumps, as it allows of a larger water way.

Messrs. W. & C. MATHER feel confident that it is the BEST ELASTIC METALLIC PACKING yet known, for the above reasons.

Models may be seen at the Salford Iron-Works, Manchester; at W. Barker's, engineer, Newton-Moor; and also at J. Mather's, engineer, Beaufort-street, Chelsea, London.

VIADUCTS AND OTHER RAILWAY WORK.—The attention of Railway Engineers, Architects, and Contractors is particularly directed to the great advantages to be derived from the application of SEYSSEL ASPHALTE, as the *only impervious and permanent* covering for arches and roofs, and lining of reservoirs, gutters, &c. The arrangements of CLARIDGE'S PATENT ASPHALTE COMPANY enable it to execute works of any extent with the greatest promptitude. 62

In order to guard against the use of spurious materials, it is important that all applications for works to be executed be made direct to this company; and, as a further protection, it is suggested that Engineers, Architects, and Contractors, should require a CERTIFICATE from the company that the proper description of material has been used.

Information may be obtained as to all works which have been executed by the company since its establishment in 1838, which will prove that the failure of many works represented to have been done with the genuine material has resulted from the substitution of a spurious one.

I. FARRELL, Secretary,
Seyssel Asphalte Company, Stangate, London.

FLEXIBLE HOSE-PIPES FOR LOCOMOTIVE ENGINES, RAILWAY CRANES, FIRE-ENGINES, GAS, &c.

PATENT VULCANISED INDIA-RUBBER HOSE-PIPES AND TUBING OF EVERY DESCRIPTION. 63

These pipes are made to stand hot-water without injury—are very superior to leather pipes, or the common India-rubber pipes; and, as they do not become hard or stiff in the lowest temperatures, or require any application when out of use, are particularly well adapted for fire-engines.

FLEXIBLE TUBING, of every description, for gas, chemical purposes, &c.

VULCANISED INDIA-RUBBER WASHERS, all sizes, for steam and hot-water joints, &c.—Sole manufacturer, JAMES LYNE HANCOCK,

Goswell Mews, Goswell-road, London.

TO ENGINEERS AND BOILER-MAKERS.

LAP-WELDED IRON TUBES, FOR MARINE AND LOCOMOTIVE STEAM-BOILERS, TUBES FOR STEAM, GAS, AND OTHER PURPOSES, *ALL SORTS OF GAS FITTINGS.* 64

THE BIRMINGHAM PATENT IRON TUBE COMPANY,

42, CAMBRIDGE-STREET, BIRMINGHAM, & SMETHWICK, STAFFORDSHIRE,

MANUFACTURE BOILER and GAS TUBES, under an exclusive License from Mr. R. Prosser, the patentee. These tubes are very extensively used in the boilers of marine and locomotive steam-engines in England and on the Continent—are stronger, lighter, cheaper, and more durable than brass or copper tubes, and warranted not to open in the weld.

42, CAMBRIDGE-STREET, CRESCENT, BIRMINGHAM.

WORKS—SMETHWICK, STAFFORDSHIRE.

LONDON WAREHOUSE—No. 68, UPPER THAMES-STREET.

IMPROVED [illegible] JACKS.

IMPROVED RATCHET JACK. HALEY'S PATENT LIFTING JACK. 65

W. AND J. GALLOWAY,

KNOTT MILL,

MANCHESTER.

**** The attention of parties who employ

Lifting Jacks,

is respectfully requested to the superiority of those annexed, over those hitherto in use.

PATENT KAMPTULICON (OR CAOUTCHOUC AND CORK) MATERIAL.

SCALE OF PRICES. 66

Thickness in inches.	Wght. of Material per square yard, compared with wood.	Price per square yard.	Purposes to which the Material may be applied.
1-16	,,	2s.	Felt for Sheathing under Copper, and in destroying galvanic action between the Copper and Iron—also, for Telegraph, as a perfect non-conductor, *used by Electric Telegraph, Strand.*
1-8	,,	3s.	For placing under Carpets, and as a Floor Cloth for Stairs, Offices, Aisles of Churches, to deaden sound, and prevent noxious effluvia from vaults beneath.—*See Passage to Lord Chamberlain's Office, House of Lords.*
1-4	9 lbs., or one-third the weight of oak.	4s. 6d.	For Railway Carriages, Buffers, Shields, &c., and to place between Rails and Sleepers, *Joints of Iron Bridges*, and to use, in all cases, where it is desirable *to destroy vibration, and obviate the effects of concussion—used by the South-Western Railway, &c.*
1-2	17 lbs., or ditto	10s.	Lining for Floors of Carriages, Horse Boxes, and covering Walls of Riding-Houses, *as at the Castle, Windsor.*
3-4	27 lbs., or ditto	12s.	Life Boats and other Shipping purposes—*used by Mr. Rainey, of Cowes, on the Ganymede and Gondola, of the Royal Victoria Yacht Club, &c.*
1	36 lbs., or ditto	16s. 8d.	Lining Rooms and Floors of Lunatic Asylums, *as at Bethlem Hospital, Northampton, &c.*

6 For Lining Iron Men-of-War, to ameliorate the effects of Cannon Shot, by retaining the Splinters; and by the Holes simultaneously closing, the Water is kept out, *as proved at the Arsenal, Woolwich.*

N.B.—Felt for the Inner Soles of Boots and Shoes, at 3s. per dozen pairs. Hoof Protectors, lined with Gutta Percha, for diseased feet of horses, 2s. 6d. per pair. Elastic Putty, for preventing Cabin Windows, *Skylights, &c.*, being broken by concussion, hailstorms, *&c.** Life Boats of Iron Kamptulicon, 30s. per foot.

GEORGE WALTER, Co-Proprietor and Manager.

FACTORY, GREENWICH-ROAD, where all orders are requested to be sent.

* From its lightness it is not more expensive than common putty.

Just published, Part I.,

COMBUSTION of COAL, CHEMICALLY & PRACTICALLY CONSIDERED. With coloured plates. 67

By CHARLES WYE WILLIAMS, Esq.

London: Simpkin, Marshall, & Co., and J. Weale—*Birmingham:* Wrightson & Webb.

In the press, and shortly will be published, with several illustrations, price 1s.,

THE PERRAN CHERRYBEAM: A Comic Poem. By the author of the *St. Agnes Beer Hunt*—illustrative of Cornish dialect and phraseology—being the ADVENTURES of DANNIEL DADDLE and JIMMY LINKIN, 68

"And what befel them is here put in,
And the unsartintees of shutting."

Truro: J. R. Netherton. Dated Sept. 20, 1847.

PATENT IMPROVEMENTS IN CHRONOMETERS, WATCHES, AND CLOCKS.—E. J. DENT, 82, Strand, and 33, Cockspur-street, watch and clock maker, BY APPOINTMENT, to the Queen and his Royal Highness Prince Albert, begs to acquaint the public, that the manufacture of his chronometers, watches, and clocks, is secured by three separate patents, respectively granted in 1836, 1840, 1842. Silver lever watches, jewelled in four holes, 6 gs. each; in gold cases, from £8 to £10 extra. Gold horizontal watches, with gold dials, from 8 gs. to 12 gs. each. 69

DENT'S PATENT DIPLIEDOSCOPE, or meridian instrument, is now ready for delivery. Pamphlets containing a description and directions for its use 1s. each, but to customers gratis.

CRICKET STEAM-BOAT.—HENRY BAKER begs to call the attention of Steam-boat Proprietors, Engineers, and persons who may possess steam-engines, to his NEWLY-IMPROVED STEAM-GAUGE, for high or low pressure, and for showing the temperature of the steam. The gauges on board the ill-fated *Cricket* were useless—according to the evidence adduced at the inquest—on account of the water and mercury becoming intermixed, at the pressure of 40 lbs. per square inch. 70

H. B.'s gauges are subject to no such defects, but will show any pressure with accuracy; and had they been used, the accident might have been prevented: they are fitted up in a mahogany case, price £2 2s. each.—HENRY BAKER, Barometer, Thermometer, and Steam Instrument Maker, No. 90, HATTON-GARDEN.

TO ENGINEERS, RAILWAY CONTRACTORS, MINING AGENTS, IRONMASTERS, AND OTHERS REQUIRING FINE GREASE for MACHINERY and AXLES of every description.—JOSEPH PERCIVAL'S IMPROVED ANTI-FRICTION GREASE is—after trials on machinery and axles of every kind where constant friction is kept up—admitted to be the most useful, economical, and best preparation of the kind ever offered to the public. 71

References to scientific and practical men can be given, and testimonials shown of its great excellence.—Samples forwarded on application at the manufactory, Green-street, Wellington-street, Blackfriars-road, London.

STRONG MIXING PIG-IRON.—The YSTALYFERA IRON COMPANY beg to solicit ORDERS for their ANTHRACITE PIG-IRON. This iron mixes well with Scotch pig—imparting to it strength and elasticity, and receiving from it a portion of its softness and fluidity. No. 3 Pig is recommended for mixing with soft iron—Nos. 1 and 2, for machinery castings, requiring great soundness and strength. At this period, when cast-iron is so much employed in the construction of bridges and other buildings, requiring all the strength and elasticity which the best mixture of metal will afford, it may be interesting to call attention to the characteristics of ANTHRACITE PIG-IRON, as REPORTED on by that great practical authority, the late DAVID MUSHET, Esq., M.I.C.E.:— 72

"It greatly exceeds, in *strength*, in *defective* powers, and capacity to resist *impact*, any iron at this time manufactured in the United Kingdom."

"It now only remains for me to mention a property peculiar to this iron, which was noticed at the time I made the trial experiments, four years ago, but which has been more fully developed in those more recently made. The property referred to is one of *great springiness*, or *elasticity*, which communicates a tendency to the bar, in deflecting and breaking, to resume its rectangular form. Bars that had obtained a permanent set of 2-10ths, when afterwards broken, presented but a slight deviation from a right line; and, in no case, did the curvature exceed one-fourth of a tenth."

"It was also remarked, that most of the fractures, in breaking, presented a *regularity of grain* throughout, resembling the structure of *unhardened steel.*"

Address THE YSTALYFERA IRON COMPANY,

Dated June 22, 1847. *Near NEATH, SOUTH WALES.*

HOT-BLAST WITHOUT COAL, LABOUR, OR REPAIRS. DIXON AND BUDD'S PATENTS. 73

Apply for particulars, or to inspect the process in operation on six blast-furnaces, to J. Palmer Budd, Esq., Ystalyfera Iron-Works, near Neath.

Dated June 22, 1847.

ELECTRIC TELEGRAPH COMPANY.

LONDON, 345, STRAND, September 1, 1847.

COMMERCIAL TELEGRAPH.

The works of the lines for commercial communications, between the places enumerated below, embracing a SYSTEM of TELEGRAPHS for COMMERCIAL PURPOSES only, and distinct from that reserved for the special use of railways, being so far advanced as to admit of their completion by the commencement of the coming year, the directors think that the time has now arrived, when it becomes their duty to make known the arrangements which they contemplate for the accommodation of the public.

STATIONS will BE OPENED, in central situations, in the PRINCIPAL TOWNS, whence MESSAGES and DISPATCHES will be FORWARDED TO, and RECEIVED FROM, all the OTHER STATIONS of the ELECTRIC TELEGRAPH COMPANY.

In order to give to Merchants, Bankers, Manufacturers, and all connected with trade, the greatest possible amount of information, a ROOM will be RESERVED in each of the COMPANY'S STATIONS for SUBSCRIBERS, in which will be received, tabulated, and exhibited, all Intelligence of Commercial or Public Interest—for instance: 74

SHIP LISTS, from the various Ports.
SHARE LISTS, from the various Exchanges.
PRICES CURRENT.
STOCK EXCHANGE LISTS.
CORN MARKETS, from the various Towns.
PRICES OF LIVE STOCK, &c. &c.

In LONDON, a CENTRAL STATION, suited to the importance of the metropolis, is in COURSE OF ERECTION, in the immediate vicinity of the Bank and Royal Exchange; in this Station the whole TELEGRAPHIC NEWS of the COUNTRY will be CONCENTRATED, and FORWARDED in EVERY DIRECTION. And here, as in other towns, a ROOM will be RESERVED for SUBSCRIBERS.

The SUBSCRIPTION to these ROOMS will be TWO GUINEAS per annum, paid in advance, which will entitle SUBSCRIBERS to the RIGHT of ENTRANCE to ALL the SUBSCRIPTION ROOMS of the COMPANY—including the Central Station at London.

The foregoing details some of the advantages of the Commercial Telegraph to subscribers; but the requirements of the public in general will be provided for by the establishment of offices, which will at all times be open for the reception and transmission of messages and dispatches; while messengers will be kept at the various stations, by whom dispatches may be sent out to any part of the town where the communication has been received by Telegraph at the Company's Station.

Subscribers' Names are received at the Commercial Telegraph Office, where any further information may be obtained.

The following are the Towns to which the Commercial Telegraph will be first extended:—

London	Chester	Southampton	Derby	Darlington
Margate	Liverpool	Winchester	Nottingham	Newcastle
Ramsgate	Rotherham	Dorchester	Lincoln	Berwick
Deal	Barnsley	Bristol	Chesterfield	Edinburgh
Dover	Wakefield	Gloucester	Sheffield	Glasgow
Folkestone	Leeds	Cheltenham	Bradford	Scarborough
Canterbury	Halifax	Peterborough	Wisbeach	Bridlington
Northampton	Rochdale	Yarmouth	Lowestoft	Stamford
Coventry	Hull	Huntingdon	Cambridge	Norwich
Birmingham	Maidstone	Hertford	Chelmsford	St. Ives
Wolverhampton	Tonbridge	Manchester	Ipswich	Ware
Stafford	Gosport	Leicester	York	Colchester

J. LEWIS RICARDO, Chairman.

LONDON AND PROVINCIAL JOINT-STOCK LIFE INSURANCE COMPANY.—The DIRECTORS invite the public generally, also BUILDING SOCIETIES and BORROWERS, through them or from other parties, to examine the peculiar system and striking advantages offered by this office. 75

Every description of life assurance, investment, and loan business transacted.

Low rates of premium and three-fourths of profits divided.

For prospectuses, &c., apply to JOHN MASSON, Secretary.

Offices, 39, Nicholas-lane, Lombard-street.

NATIONAL LOAN FUND LIFE ASSURANCE SOCIETY, 26, *CORNHILL, LONDON.*

Capital £500,000.—Empowered by Act of Parliament.

This institution embraces important and substantial advantages with respect to Life Assurances and Deferred Annuities. The assured has, on all occasions, the power to borrow, without expense or forfeiture of the policy, two-thirds of the premiums paid (see table); also the option of selecting benefits, and the conversion of his interests to meet other conveniences or necessity. 76

Assurances for terms of years are granted on the lowest possible rates.

DIVISION OF PROFITS.

The remarkable success and increasing prosperity of the society has enabled the directors, at the last annual investigation, to declare a fourth bonus, varying from 35 to 85 per cent. on the premiums paid on each policy effected on the profit scale.

EXAMPLES.

Age	Sum.	Prem.	Year.	Bonus added.	Bonus in Cash.	Permanent reduction of Premium.	Assured may Borrow.
			1837	£217 15 1	£109 0 11	£16 9 4	£445 0 0
			1838	192 3 0	87 1 4	13 10 2	395 11 1
			1839	165 11 10	74 1 9	11 3 1	346 2 3
60	£1000	£60 3 4	1840	116 7 6	54 0 10	7 15 10	296 13 4
			1841	111 6 8	49 10 0	7 10 4	247 4 5

The division of profits is annual, and the next will be made in December of the present year.

F. FERGUSON CAMROUX, Secretary.

London:—Printed and Published, weekly, by HENRY ENGLISH, at the Office, No. 26, FLEET-STREET, in the city of London, where all Communications and Advertisements are requested to be forwarded—addressed to "the Editor"—post-paid. *October 2, 1847.*

** It will at all times save much delay and inconvenience, if communications are directed simply To THE EDITOR, *Mining Journal Office,* 26, FLEET-STREET, LONDON.

And POST-OFFICE ORDERS, &c., must be made payable to WILLIAM SALMON MAMWELL, as acting for the proprietors.